

R156. Commerce, Occupational and Professional Licensing.

R156-56. Utah Uniform Building Standard Act Rules.

R156-56-101. Title.

These rules are known as the "Utah Uniform Building Standard Act Rules".

R156-56-102. Definitions.

In addition to the definitions in Title 58, Chapters 1, 55 and 56, as used in Title 58, Chapter 56 or these rules:

(1) "Building permit" means, for the purpose of determining the building permit surcharge under Subsection 58-56-9(4), a warrant, license or authorization to build or construct a building or structure or any part thereof.

(2) "Building permit fee" means, for the purpose of determining the building permit surcharge under Subsection 58-56-9(4), fees assessed by an agency of the state or political subdivision of the state for the issuance of permits for construction, alteration, remodeling, and repair and installation including building, electrical, mechanical and plumbing components.

(3) "Employed by a local regulator, state regulator or compliance agency" means, with respect to Subsection 58-56-9(1), the hiring of services of a qualified inspector whether by an employer/employee relationship, an independent contractor relationship, a fee-for-service relationship or any other lawful arrangement under which the regulating agency purchases the services of a qualified inspector.

(4) "Inspector" means a person employed by a local regulator, state regulator or compliance agency for the purpose of inspecting building, electrical, plumbing or mechanical construction, alteration, remodeling, repair or installation in accordance with the codes adopted under these rules and taking appropriate action based upon the findings made during inspection.

(5) "Permanently affixed to real property" means a manufactured home or mobile home which has complied with all of the provisions of Section 59-2-602 at the date possession of the manufactured home or mobile home is changed from the dealer to the purchaser.

(6) "Refuses to establish a method of appeal" means with respect to Subsection 58-56-8(3), that a compliance agency does not in fact adopt a formal written method of appealing uniform building standard matters in accordance with generally recognized standards of due process; or, that the compliance agency does not convene an appeals board and render a decision in the matter within ninety days from the date on which the appeal is properly filed with the compliance agency.

(7) "Uniform Building Standards" means the codes identified in Section R156-56-701 and as amended under these rules.

(8) "Unprofessional conduct" as defined in Title 58, Chapter 1 is further defined, in accordance with Subsection 58-1-203(5), in Section R156-56-502.

R156-56-103. Authority.

These rules are adopted by the division under the authority of Subsection 58-1-106(1) to enable the division to administer Title 58, Chapter 56.

R156-56-104. Organization - Relationship to Rule R156-1.

The organization of this rule and its relationship to Rule R156-1 is as described in Section R156-1-107.

R156-56-105. Board of Appeals.

If the commission is required to act as an appeals board in accordance with the provisions of Subsection 58-56-8(3), the following shall regulate the convening and conduct of the special appeals board:

(1) If a compliance agency refuses to establish a method of appeal regarding a uniform building standard issue, the appealing party may petition the commission to act as the board of appeals.

(2) The person making the appeal shall file the request to convene the commission as an appeals board in accordance with the requirements for a request for agency action, as set

forth in Subsection 63-46b-3(3)(a) and Section R151-46b-7. A request by other means shall not be considered. Any request received by the commission or division by any other means shall be returned to the appellant with appropriate instructions.

(3) A copy of the final written decision of the compliance agency interpreting or applying a code which is the subject of the dispute shall be submitted as an attachment to the request. If the person making the appeal requests, but does not timely receive a final written decision, the person shall submit an affidavit to this effect in lieu of the final written decision.

(4) The request shall be filed with the division no later than 30 days following the issuance of the disputed written decision by the compliance agency.

(5) The compliance agency shall file a written response to the request not later than 20 days after the filing of the request. The request and response shall be provided to the commission in advance of any hearing in order to properly frame the disputed issues.

(6) Except with regard to the time period specified in Subsection (7), the time periods specified in this section may, upon a showing of good cause, be modified by the presiding officer conducting the proceeding.

(7) The commission shall convene as an appeals board within 45 days after a request is properly filed.

(8) Upon the convening of the commission as an appeals board, the board members shall review the issue to be considered to determine if a member of the board has a conflict of interest which would preclude the member from fairly hearing and deciding the issue. If it is determined that a conflict does exist, the member shall be excused from participating in the proceedings.

(9) The hearing shall be a formal hearing held in accordance with the Utah Administrative Procedures Act, Title 63, Chapter 46b.

(10) Decisions relating to the application and interpretation of the code made by a compliance agency board of appeals shall be binding for the specific individual case and shall not require commission approval.

#### R156-56-106. Fees.

In accordance with Subsection 58-56-9(4), on April 30, July 31, October 31 and January 31 of each year, each agency of the state and each political subdivision of the state which assesses a building permit fee shall file with the division a report of building fees and surcharge for the immediately preceding calendar quarter; and, shall remit 80% of the amount of the surcharge to have been assessed to the division.

#### R156-56-201. Building Inspector Licensing Board.

In accordance with Section 58-56-8.5, the board shall be as follows:

- (1) one member licensed as a Combination Inspector;
- (2) one member licensed as an Inspector who is qualified in the electrical code;
- (3) one member licensed as an Inspector who is qualified in the plumbing code;
- (4) one member licensed as an Inspector who is qualified in the mechanical code; and
- (5) one member shall be from the general public.

#### R156-56-202. Advisory Peer Committees Created - Membership - Duties.

(1) There is created in accordance with Subsection 58-1-203(6) and 58-56-5(10)(e), the following committees as advisory peer committees to the Uniform Building Codes Commission:

- (a) the Education Advisory Committee consisting of seven members;
- (b) the Plumbing and Health Advisory Committee consisting of nine members;
- (c) the Structural Advisory Committee consisting of seven members;
- (d) the Architectural Advisory Committee consisting of seven members;
- (e) the Fire Protection Advisory Committee consisting of seven members;
- (f) the Mechanical Advisory Committee consisting of seven members; and
- (g) the Electrical Advisory Committee consisting of seven members.

(2) The committees shall be appointed and serve in accordance with Section R156-1-205.

The membership of each committee shall be made up of individuals who have direct knowledge or involvement in the area of code involved in the title of that committee.

(3) The duties and responsibilities of the committees shall include:

- (a) review of requests for amendments to the adopted codes as assigned to each committee by the division with the collaboration of the commission; and
- (b) submission of recommendations concerning the requests for amendment.

R156-56-301. Reserved.

Reserved.

R156-56-302. Licensure of Inspectors.

In accordance with Subsection 58-56-9(1), the licensee classifications, scope of work, qualifications for licensure, and application for license are established as follows:

(1) License Classifications. Each inspector employed by a local regulator, state regulator, compliance agency, or private agency providing inspection services to a regulator or compliance agency, shall qualify for licensure and be licensed by the division in one of the following classifications:

- (a) Combination Inspector; or
- (b) Limited Inspector.

(2) Scope of Work. The scope of work permitted under each inspector classification is as follows:

- (a) Combination Inspector.

(i) Inspect the components of any building, structure or work for which a standard is provided in the specific edition of the codes adopted under these rules or amendments to these codes as included in these rules.

(ii) Determine whether the construction, alteration, remodeling, repair or installation of all components of any building, structure or work is in compliance with the adopted codes.

(iii) After determination of compliance or noncompliance with the adopted codes take appropriate action as is provided in the aforesaid codes.

- (b) Limited Inspector.

(i) A Limited Inspector may only conduct activities under Subsections (ii), (iii) or (iv) for which the Limited Inspector has maintained current certificates under the adopted codes as provided under Subsections R156-56-302(3)(b) and R156-56-302(2)(c)(ii).

(ii) Subject to the limitations of Subsection (i), inspect the components of any building, structure or work for which a standard is provided in the specific edition of the codes adopted under these rules or amendments to these codes as included in these rules.

(iii) Subject to the limitations under Subsection (i), determine whether the construction, alteration, remodeling, repair or installation of components of any building, structure or work is in compliance with the adopted codes.

(iv) Subject to the limitations under Subsection (i), after determination of compliance or noncompliance with the adopted codes, take appropriate action as is provided in the adopted codes.

- (c) Transitional Provisions.

(i) A license issued to an inspector trainee which license is active at the time of this rule change shall remain effective throughout the term of the original license and shall have authority as specified under the prior rules in effect on July 1, 1999. Thereafter, all persons must qualify for licensure under these rules.

(ii) An inspector granted a license as a Building Inspector I, Electrical Inspector I, Plumbing Inspector I, Mechanical Inspector I, Combination Inspector II - Limited Commercial Combination, Combination Inspector III, Building Inspector III, Electrical Inspector III, Plumbing Inspector III or Mechanical Inspector III under the prior rules, which license is active at the time of this rule change, shall be issued a replacement license as a Limited Inspector.

(iii) The state administered examinations upon which prior licenses were granted or upon which new limited inspector licenses may be granted shall be considered as current certification until two years after a national organization offers certification as a residential building inspector, residential electrical inspector, residential plumbing inspector or residential mechanical inspector for codes adopted under these rules. After the

state administered examinations are no longer considered current certification, licenses may not be granted or renewed unless the person has obtained current certificates issued by a national organization.

(3) Qualifications for Licensure. The qualifications for licensure for each inspector classification are as follows:

(a) Combination Inspector.

Has passed the examination for and maintained as current the following national certifications for codes adopted under these rules:

(i) the "Building Inspector Certification" issued by the International Conference of Building Officials;

(ii) the "Electrical Inspector Certification" issued by the International Conference of Building Officials or the "General Electrical Certification" issued by the International Association of Electrical Inspectors;

(iii) the "Plumbing Inspector Certification" issued by the International Conference of Building Officials, International Code Council or the International Association of Plumbing and Mechanical Officials or the "Commercial Plumbing Inspector Certification" issued by the International Code Council or International Association of Plumbing and Mechanical Officials; and

(iv) the "Mechanical Inspector Certification" issued by the International Conference of Building Officials or the "Commercial Mechanical Inspector Certification" issued by the International Association of Plumbing and Mechanical Officials.

(b) Limited Inspector.

Has passed the examination for and maintained as current one or more of the following national certifications for codes adopted under these rules:

(i) the "Building Inspector Certification" issued by the International Conference of Building Officials;

(ii) the "Electrical Inspector Certification" issued by the International Conference of Building Officials or the "General Electrical Certification" issued by the International Association of Electrical Inspectors;

(iii) the "Plumbing Inspector Certification" issued by the International Conference of Building Officials, International Code Council or the International Association of Plumbing and Mechanical Officials or the "Commercial Plumbing Inspector Certification" issued by the International Code Council or International Association of Plumbing and Mechanical Officials;

(iv) the "Mechanical Inspector Certification" issued by the International Conference of Building Officials or the "Commercial Mechanical Inspector Certification" issued by the International Association of Plumbing and Mechanical Officials;

(v) the "Combination Dwelling Inspector Certification" issued by the International Conference of Building Officials;

(vi) the "Limited Commercial Combination Certification" issued by the International Conference of Building Officials;

(vii) the "Residential Building Inspector Certification" issued by the International Conference of Building Officials;

(viii) the "Residential Electrical Inspector Certification" issued by the International Conference of Building Officials;

(ix) the "Residential Plumbing Inspector Certification" issued by the International Conference of Building Officials; or

(x) the "Residential Mechanical Inspector Certification" issued by the International Conference of Building Officials.

(4) Application for License.

(a) An applicant for licensure shall:

(i) submit an application in a form prescribed by the division; and

(ii) pay a fee determined by the department pursuant to Section 63-38-3.2.

R156-56-303. Renewal Cycle - Procedures.

(1) In accordance with Subsection 58-1-308(1), the renewal date for the two-year cycle applicable to licenses under Title 58, Chapter 56 is established by rule in Section R156-1-308.

(2) Renewal procedures shall be in accordance with Section R156-1-308.

R156-56-501. Reserved.  
Reserved.

R156-56-502. Unprofessional Conduct - Building Inspectors.

"Unprofessional conduct" includes:

- (1) knowingly failing to inspect or issue correction notices for code violations which when left uncorrected would constitute a hazard to the public health and safety and knowingly failing to require that correction notices are complied with;
- (2) the use of alcohol or the illegal use of drugs while performing duties as a building inspector or at any time to the extent that the inspector is physically or mentally impaired and unable to effectively perform the duties of an inspector;
- (3) gross negligence in the performance of official duties as an inspector;
- (4) failure to supervise an inspector trainee for which an inspector assumes responsibility in accordance with these rules or in a manner to ensure the public health, safety and welfare;
- (5) the personal use of information or knowingly revealing information to unauthorized persons when that information has been obtained by the inspector as a result of their employment, work, or position as an inspector;
- (6) unlawful acts or acts which are clearly unethical under generally recognized standards of conduct of an inspector;
- (7) engaging in fraud or knowingly misrepresenting a fact relating to the performance of duties and responsibilities as an inspector;
- (8) knowingly failing to require that all plans, specifications, drawings, documents and reports be stamped by architects, professional engineers or both as established by law;
- (9) knowingly failing to report to the Division any act or omission of a licensee under Title 58, Chapter 55, which when left uncorrected constitutes a hazard to the public health and safety;
- (10) knowingly failing to report to the Division unlicensed practice by persons performing services who are required by law to be licensed under Title 58, Chapter 55;
- (11) approval of work which materially varies from approved documents that have been stamped by an architect, professional engineer or both unless authorized by the licensed architect, professional engineer or both; and
- (12) failing to produce verification of current licensure and current certifications for the codes adopted under these rules upon the request of the Division, any compliance agency, or any contractor or property owner whose work is being inspected.

R156-56-601. Modular Unit Construction and Set-up.

Modular construction and set-up shall be as set forth in accordance with the following:

- (1) Construction shall be in accordance with the building standards accepted by the state pursuant to Section 58-56-4.
- (2) The inspection of the construction, modification of or set-up of a modular unit shall be the responsibility of the local regulator; however, nothing in these rules shall preclude the local regulator from entering into an agreement with another qualified person for the inspection of the unit(s) in the manufacturing facility.

R156-56-602. Factory Built Housing Dealer Bonds.

- (1) Pursuant to the provisions of Subsection 58-56-16(2)(c), a factory built housing dealer shall provide a registration bond issued by a surety acceptable to the Division in the amount of \$50,000. An acceptable surety is one that is listed in the Department of Treasury, Fiscal Service, Circular 570, current revision, entitled "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies".
- (2) The coverage of the registration bond shall include losses which may occur as the result of the factory built housing dealer's violation of the unprofessional or unlawful provisions contained in Title 58, Chapters 1 and 56.

R156-56-701. Specific Editions of Uniform Building Standards.

(1) In accordance with Subsection 58-56-4(3), and subject to the limitations contained in Subsection (5), (6), and (7), the following codes are hereby incorporated by reference and adopted as the construction standards to be applied to building construction, alteration, remodeling and repair and in the regulation of building construction, alteration, remodeling and repair in the state:

(a) the 2000 edition of the International Building Code (IBC) as modified by Chapter 11 of the 2001 edition of the Supplement to the International Building Code, promulgated by the International Code Council, and amendments adopted under these rules together with standards incorporated into the IBC by reference, including but not limited to, the 2000 edition of the International Energy Conservation Code (IECC) promulgated by the International Code Council and the 2000 edition of the International Residential Code (IRC) promulgated by the International Code Council shall become effective on January 1, 2002;

(b) the 1999 edition of the National Electrical Code (NEC) promulgated by the National Fire Protection Association, to become effective January 1, 2000;

(c) the 2000 edition of the International Plumbing Code (IPC) promulgated by the International Code Council and amendments adopted under these rules in Section R156-56-707 shall become effective on January 1, 2001;

(d) the 2000 edition of the International Mechanical Code (IMC) together with all applicable standards set forth in the 2000 International Fuel Gas Code (IFGC) (formerly included as part of the IMC) and amendments adopted under these rules in Section R156-56-708 shall become effective on January 1, 2002;

(e) subject to the provisions of Subsection (4), the Federal Manufactured Housing Construction and Safety Standards Act (HUD Code) as promulgated by the Department of Housing and Urban Development and published in the Federal Register as set forth in 24 CFR parts 3280 and 3282 as revised April 1, 1990; and

(f) subject to the provisions of Subsection (4), the 1994 edition of NCSBCS A225.1 Manufactured Home Installations promulgated by the National Conference of States on Building Codes and Standards (NCSBCS).

(2) Amendments adopted by rule to prior editions of the Uniform Building Standards shall remain in effect until specifically amended or repealed.

(3) The manufacturer, dealer or homeowner shall be permitted to design for unusual installation of a manufactured home not provided for in the manufacturer's standard installation instruction or NCSBCS/ANSI 225.1, Manufactured Home Installations, provided the design is approved in writing by a professional engineer or architect licensed in Utah. Guidelines for Manufactured Housing Installation as promulgated by the International Conference of Building Officials may be used as a reference guide.

(4) Pursuant to the Federal Manufactured Home Construction and Safety Standards Section 604(d), a manufactured home may be installed in the state of Utah which does not meet the local snow load requirements as specified in Subsection R156-56-704; however all such homes which fail to meet the standards of Subsection R156-56-704 shall have a protective structure built over the home which meets the International Building Code and the snow load requirements under Subsection R156-56-704.

(5) To the extent that the building codes adopted under Subsection (1) establish local administrative functions or establish a method of appeal which pursuant to Section 58-56-8 are designated to be established by the compliance agency, such provisions are not included in the codes adopted hereunder but authority over such provisions are reserved to the compliance agency to establish such provisions.

(6) To the extent that the building codes adopted under Subsection (1) establish provisions, standards or references to other codes which by state statutes are designated to be established or administered by other state agencies or local city, town or county jurisdictions, such provisions are not included in the codes adopted herein but authority over such provisions are reserved to the agency or local government having authority over such provisions. Provisions excluded under this Subsection include but are not limited to:

(a) the International Property Maintenance Code;

(b) the International Private Sewage Disposal Code, authority over which would be reserved to the Department of Health and the Department of Environmental Quality;

(c) the International Fire Code which pursuant to Section 58-3-7 authority is reserved to the Utah Fire Prevention Board; and

(d) day care provisions which are in conflict with the Child Care Licensing Act, authority over which is designated to the Utah Department of Health.

(7) To the extent that the codes adopted under Subsection (1) establish provisions that exceed the authority granted to the Division, under the Utah Uniform Building Standards Act, to adopt codes or amendments to such codes by rulemaking procedures, such provisions, to the extent such authority is exceeded, are not included in the codes adopted.

**R156-56-702. Commission Override of the Division.**

(1) In the event that the director of the division rules contrary to the recommendation of the commission with respect to the provisions of Subsection 58-56-7(8), the director shall present his action and the basis for that action at the commission's next meeting or at a special meeting called by either the division or the commission.

(2) The commission may override the division's action by a two-thirds vote which equals eight votes.

(3) In the event of a vacancy on the commission, a vote of a minimum of two-thirds of the existing commissioners must be obtained to override the division.

**R156-56-703. Code Amendments.**

In accordance with Subsection 58-56-7(1), the procedure and manner under which requests for amendments to codes shall be filed with the division and recommended or declined for adoption are as follows:

(1) All requests for amendments to any of the uniform building standards shall be submitted to the division on forms specifically prepared by the division for that purpose.

(2) The processing of requests for code amendments shall be in accordance with division policies and procedures.

**R156-56-704. Statewide Amendments to the IBC.**

The following are adopted as amendments to the IBC to be applicable statewide:

(1) All references to the International Electrical Code are deleted and replaced with the National Electrical Code adopted under Subsection R156-56-701(1)(b).

(2) Section 101.4.1 is deleted and replaced with the following:

101.4.1 Electrical. The provisions of the National Electrical Code (NEC) shall apply to the installation of electrical systems, including alterations, repairs, replacement, equipment, appliances, fixtures, fittings and appurtenances thereto.

(3) In Section 202, the following definition is added:

ASSISTED LIVING FACILITY. See Section 308.1.1.

(4) Section 302.3.3 is deleted and replaced with the following:

302.3.3 Separated uses. Each portion of the building shall be individually classified as to use and shall be considered separated from other occupancies when completely separated from adjacent areas by fire barrier walls or horizontal assemblies or both having a fire-resistance rating determined in accordance with this sections.

302.3.3.1 All occupancies. Each fire area shall be separated from other occupancies in other fire areas in accordance with Table 302.3.3 based on the occupancy in the fire areas, and shall comply with the height limitations based on the use of that space and the type of construction classification. In each story the building area shall be such that the sum or the ratios of the floor area of each use divided by the allowable area for each use shall not exceed 1.

Exceptions for R-3 and U Groups:

1. The private garage shall be separated from the residence and its attic area by means of materials approved for one-hour fire resistive construction applied to the garage side. Door openings between the garage and the residence shall be equipped with either solid wood doors not less than 1 3/8 inches (35 mm) thick or doors in compliance with Section 714.2.3. Openings from a private garage directly into a room used for sleeping purposes shall not be permitted.

2. Ducts in the private garage and ducts penetrating the walls or ceilings separating the dwelling from the garage shall be constructed of a minimum No. 26 gage (.48 mm) sheet steel and shall have no openings into the garage.

3. A separation is not required between a Group R-3 and Group U carport provided the carport is entirely open on two or more sides and there are not enclosed spaces above.

Where the building is equipped throughout with an automatic sprinkler system, the fire resistance ratings in Table 302.3.3 shall be reduced by one hour but not to less than one hour and to not less than that required for floor construction according to the type of construction. The one hour reduction shall not apply to fire area separations when H-1, H-2, H-3, or I-2 occupancies are included in the areas being separated.

Table 302.3.3, entitled "Required Separation of Occupancies", dated January 1, 2002, published by the Department of Commerce, Division of Occupational and Professional Licensing is hereby adopted and incorporated by reference. Table 302.3.3 identifies what type of separation of occupancies requirements are mandated in various types of property use classifications.

TABLE 302.3.3  
REQUIRED SEPARATION OF MIXED OCCUPANCIES (HOURS)<sup>a</sup>

USE	A-1	A-2	A-3	A-4	A-5	B <sup>b</sup>	E	F-1	F-2	H-1	H-2	H-3	H-4	H-5	I-1	I-2	I-3	I-4	M <sup>b</sup>	R-1	R-2	R-3 R-4	S-1	S-2 <sup>c</sup>	U
A-1	-	2	2	2	2	2	2	3	2	NP	4	3	2	4	2	2	2	2	2	2	2	2	3	2	1
A-2 <sup>h</sup>	-	-	2	2	2	2	2	3	2	NP	4	3	2	4	2	2	2	2	2	2	2	2	3	2	1
A-3 <sup>d,e</sup>	-	-	-	2	2	2	2	3	2	NP	4	3	2	4	2	2	2	2	2	2	2	2	3	2	1
A-4	-	-	-	-	2	2	2	3	2	NP	4	3	2	4	2	2	2	2	2	2	2	2	3	2	1
A-5	-	-	-	-	-	2	2	3	2	NP	4	3	2	4	2	2	2	2	2	2	2	2	3	2	1
B <sup>b</sup>	-	-	-	-	-	-	2	3	2	NP	2	1	1	1	2	2	2	2	2	2	2	2	3	2	1
E	-	-	-	-	-	-	-	3	2	NP	4	3	2	3	2	2	2	2	2	2	2	2	3	2	1
F-1	-	-	-	-	-	-	-	-	3	NP	2	1	1	1	3	3	3	3	3	3	3	3	3	3	3
F-2	-	-	-	-	-	-	-	-	-	NP	2	1	1	1	2	2	2	2	2	2	2	2	3	2	1
H-1	-	-	-	-	-	-	-	-	-	-	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
H-2	-	-	-	-	-	-	-	-	-	-	-	1	2	2	4	4	4	4	2	4	4	4	2	2	1
H-3	-	-	-	-	-	-	-	-	-	-	-	-	1	1	4	3	3	3	1	3	3	3	1	1	1
H-4	-	-	-	-	-	-	-	-	-	-	-	-	-	1	4	4	4	4	1	4	4	4	1	1	1
H-5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	4	3	1	4	4	4	1	1	3
I-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	2	2	2	2	4	3	2
I-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	2	2	2	3	2	1
I-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	2	2	3	2	1
I-4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	2	3	2	1
M <sup>b</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	3	2	1
R-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	3	2	1
R-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	2	1
R-3 R-4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	2 <sup>g</sup>	1 <sup>g</sup>
S-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3
S-2 <sup>c</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

For SI: 1 square foot = 0.0929 m<sup>2</sup>.

NP = Not permitted.

a. See Section 302.3.3 for reductions permitted.

b. Occupancy separation need not be provided for incidental storage areas within Groups B and M if the:

1. Area is less than 10 percent of the floor area, or
2. Area is provided with an automatic fire-extinguishing system and is less than 3,000 square feet, or
3. Area is less than 1,000 square feet.

c. Areas used only for private or pleasure vehicles may reduce separation by 1 hour.

d. Accessory assembly areas are not considered separate occupancies if the floor area is 750 square feet or less.

e. Assembly uses accessory to Group E are not considered separate occupancies.

f. Accessory religious educational rooms and religious auditoriums with occupant loads of less than 100 are not considered separate occupancies.

g. See exception to Section 302.3.3.

h. Commercial kitchens need not be separated from the restaurant seating areas that they serve.

(5) Section 305.2 is deleted and replaced with the following:

305.2 Day care. The building or structure, or portion thereof, for educational, supervision, child day care centers, or personal care services of more than four children shall be classified as a Group E occupancy. See Section 419 for special requirements for Group E child day care centers.

Exception: Areas used for child day care purposes with a Residential Certificate, Family License or Family Group License may be located in a Group R-2 or R-3 occupancy as provided in Section 310.1 and as applicable in Section 101.2.

Child day care centers providing care for more than 100 children 2 1/2 years or less of age shall be classified as Group I-4.

(6) In Section 308 the following definitions are added:

308.1.1 Definitions. The following words and terms shall, for the purposes of this section and as used elsewhere in this code, have the meanings shown herein.

TYPE 1 ASSISTED LIVING FACILITY. A residential facility that provides a protected living arrangement for ambulatory, non-restrained persons who are capable of achieving mobility sufficient to exit the facility without the assistance of another person.

TYPE 2 ASSISTED LIVING FACILITY. A residential facility that provides an array of coordinated supportive personal and health care services to residents who meet the definition of semi-independent.

SEMI-INDEPENDENT. A person who is:

A. Physically disabled but able to direct his or her own care; or

B. Cognitively impaired or physically disabled but able to evacuate from the facility with the physical assistance of one person.

(7) Section 308.2 is deleted and replaced with the following:

308.2 Group I-1. This occupancy shall include a building or part thereof housing more than 16 persons, on a 24-hour basis, who because of age, mental disability or other reasons, live in a supervised residential environment that provides personal care services. The occupants are capable of responding to an emergency situation without physical assistance from staff. This group shall include, but not be limited to, the following: residential board and care facilities, type 1 assisted living facilities, half-way houses, group homes, congregate care facilities, social rehabilitation facilities, alcohol and drug centers and convalescent facilities. A facility such as the above with five or fewer persons shall be classified as a Group R-3. A facility such as above, housing at least six and not more than 16 persons, shall be classified as a Group R-4.

(8) Section 308.3 is deleted and replaced with the following:

308.3 Group I-2. This occupancy shall include buildings and structures used for medical, surgical, psychiatric, nursing or custodial care on a 24-hour basis of more than three persons who are not capable of self-preservation. This group shall include, but not be limited to the following: hospitals, nursing homes (both intermediate care facilities and skilled nursing facilities), mental hospitals, detoxification facilities, ambulatory surgical centers with two or more operating rooms where care is less than 24 hours and type 2 assisted living facilities. Type 2 assisted living facilities with five or fewer persons shall be classified as a Group R-4. Type 2 assisted living facilities as defined in 308.1.1 with at least six and not more than sixteen residents shall be classified as a Group I-1 facility.

(9) Section 308.3.1 is deleted and replaced with the following:

308.3.1 Child care facility. A child care facility that provides care on a 24 hour basis to more than four children 2 1/2 years of age or less shall be classified as Group I-2.

(10) Section 308.5 is deleted and replaced with the following:

308.5 Group I-4, day care facilities. This group shall include buildings and structures occupied by persons of any age who receive custodial care less than 24 hours by individuals other than parents or guardians, relatives by blood, marriage, or adoption, and in a place other than the home of the person cared for. A facility such as the above with four or fewer persons shall be classified as an R-3. Places of worship during religious functions and Group E child day care centers are not included.

(11) Section 308.5.2 is deleted and replaced with the following:

308.5.2 Child care facility. A facility that provides supervision and personal care on less than a 24 hour basis for more than 100 children 2 1/2 years of age or less shall be classified as Group I-4.

(12) In Section 310.1 the R-3 section is deleted and replaced with the following:

R-3 Residential occupancies where the occupants are primarily permanent in nature and not classified as R-1, R-2 or I and where buildings do not contain more than two dwelling units, or adult and child care facilities that provide accommodations for four or fewer persons of any age for less than 24 hours. Areas used for day care purposes may be located in a Residential Group, R-3 occupancy provided the building substantially complies with the requirements for a dwelling unit and under all of the following conditions:

1. Compliance with the Utah Administrative Code, R710-8, Day Care Rules, as enacted under the authority of the Utah Fire Prevention Board.
2. Use is approved by the State Department of Health, as enacted under the authority of the Utah Child Care Licensing Act, UCA, Sections 26-39-101 through 26-39-110, and in any of the following categories:
  - a. Utah Administrative Code, R430-50, Residential Certificate Child Care Standards.
  - b. Utah Administrative Code, R430-90, Licensed Family Child Care.
3. Compliance with all zoning regulations of the local regulator.

(13) A new section 310.4 is added as follows:

310.4 Floor-level exit signs. Where exit signs are required by section 1003.2.10.1, additional approved exit signs that are internally or externally illuminated, photoluminescent or self-luminous, shall be provided in all corridors serving guest rooms of R-1 occupancies. The bottom of such signs shall not be less than 6 inches (152 mm) nor more than 8 inches (203 mm) above the floor level and shall indicate the path of exit travel. For exit and exit access doors, the sign shall be on the door or adjacent to the door with the closest edge of the sign with 8 inches (203 mm) of the door frame.

(14) In section 403.10.1.1 the exception is deleted.

(15) A new section 419 is added as follows:

Section 419 Group E Child Day Care Centers. Group E child day care centers shall comply with Section 419.

419.1 Location at grade. Group E child day care centers shall be located at the level of exit discharge.

Exception: Child day care spaces for children over the age of 24 months may be located on the second floor of buildings equipped with automatic fire protection throughout and an automatic fire alarm system.

419.2 Egress. All Group E child day care spaces with an occupant load of 10 or more shall have a second means of egress. If the second means of egress is not an exit door leading directly to the exterior, the room shall have an emergency escape and rescue window complying with Section 1009.

(16) Section 706.3.5 is deleted and replaced with the following:

706.3.5 Separation of mixed occupancies. Where the provisions of Section 302.3.3 are applicable, the fire barrier separating mixed occupancies shall have a fire-resistance rating of not less than that indicated in Section 302.3.3 based on the occupancies being separated.

(17) A new Section 706.3.6 is added as follows:

706.3.6. Single occupancy fire areas. The fire barrier separating a single occupancy into different fire areas shall have a fire resistance rating of not less than that indicated in Table 706.3.6.

TABLE 706.3.6  
FIRE-RESISTANCE RATING REQUIREMENTS  
FOR FIRE BARRIER ASSEMBLIES BETWEEN  
FIRE AREAS

OCCUPANCY GROUP	FIRE-RESISTANCE RATING (IN HOURS)
H-1, H-2	4
F-1, H-3, S-1	3

A, B, E, F-2, H-4, H-5, I

M, R, S-2

2

U

1

(18) Section 710.3 is deleted and replaced with the following:

710.3 Fire-resistance rating. The fire-resistance rating of floor and roof assemblies shall not be less than that required by the building type of construction. Where the floor assembly separates mixed occupancies, the assembly shall have a fire-resistance rating of not less than that required in Section 302.3.3 based on the occupancies being separated. Where the floor assembly separates a single occupancy into different fire areas, the assembly shall have a fire-resistance rating of not less than that required by Section 706.3.6. Floor assemblies separating dwelling units or guestrooms shall be a minimum of 1-hour fire-resistance-rated construction.

Exception: Dwelling unit and guestroom separations in buildings of Type IIB, IIIB and VB construction shall have fire-resistance ratings of not less than 1/2 hour in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

(19) In section 902, the definition for record drawings is deleted and replaced with the following:

RECORD DRAWINGS. Drawings ("as built") that document all aspects of a fire protection system as installed.

(20) Section 903.2.5 is deleted and replaced with the following:

903.2.5 Group I. An automatic sprinkler system shall be provided throughout buildings with Group I fire areas. Listed quick response or residential sprinkler heads shall be installed in patient or resident sleeping areas.

(21) Section 903.2.9 Group R-4 is deleted and replaced with the following:

An automatic sprinkler system shall be provided throughout buildings with Group R-4 fire areas that contain more than eight occupants. Listed quick response or residential sprinkler heads shall be installed in patient or resident sleeping areas.

(22) Section 905.5.3 is deleted and replaced with the following:

905.5.3 Class II system 1-inch hose. A minimum 1-inch (25.4 mm) hose shall be permitted to be used for hose stations in light-hazard occupancies where investigated and listed for this service and where approved by the code official.

(23) In section 1002, the definition for exit discharge is deleted and replaced with the following:

EXIT DISCHARGE. That portion of a means of egress system between the termination of an exit and a public way or safe dispersal area.

(24) In section 1003.2.12.1 the exception is deleted and replaced with the following:

Exceptions:

1. For occupancies in Group R-3 and within individual dwelling units in occupancies in Group R-2, as applicable in Section 101.2, guards whose top rail serves as a handrail shall have a height not less than 34 inches (864 mm) and not more than 38 inches (965 mm) measured vertically from the leading edge of the stair tread nosing.

2. For occupancies in Group R-3 and within individual dwelling units in occupancies in Group R-2, as applicable in section 101.2, guards shall form a protective barrier not less than 36 inches (914 mm).

(25) Section 1003.2.12.2 is deleted and replaced with the following:

1003.2.12.2 Opening limitations. Open guards shall have balusters or ornamental patterns such that a 4-inch-diameter (102 mm) sphere cannot pass through any opening up to a height of 34 inches (864 mm). From a height of 34 inches (864 mm) to 42 inches (1067 mm) above the adjacent walking surface, a sphere 8 inches (203 mm) in diameter shall not pass. For occupancies in Group R-3 and within individual dwelling units in occupancies in Group R-2, as applicable in Section 101.2, required guards shall not be constructed with horizontal rails or other ornamental pattern that results in a ladder effect.

Exceptions:

1. The triangular openings formed by the riser, tread and bottom rail at the open side of a stairway shall be of a maximum size such that a sphere of 6 inches (152 mm) in diameter cannot pass through the opening.

2. At elevated walking surfaces for access to and use of electrical, mechanical, or plumbing systems or equipment, guards shall have balusters or be of solid materials such that a sphere with a diameter of 21 inches (533 mm) cannot pass through any opening.

3. In occupancies in Group I-3, F, H or S, balusters, horizontal intermediate rails or other construction shall not permit a sphere with a diameter of 21 inches (533 mm) to pass through any opening.

4. In assembly seating areas, guards at the end of aisles where they terminate at a fascia of boxes, balconies, and galleries shall have balusters or ornamental patterns such that a 4-inch-diameter (102 mm) sphere cannot pass through any opening up to a height of 26 inches (660 mm). From a height of 26 inches (660 mm) to 42 inches (1067 mm) above the adjacent walking surfaces, a sphere 8 inches (203 mm) in diameter shall not pass.

(26) Section 1003.3.3.11.3 is amended to include the following exception at the end of the section:

Exception. Non-circular handrails serving an individual unit in a Group R-1, Group R-2 or Group R-3 occupancy shall be permitted to have a maximum cross sectional dimension of 3.28 inches (83 mm) measured 2 inches (51 mm) down from the top of the crown. Such handrail is required to have an indentation on both sides between 0.625 inch (16 mm) and 1.5 inches (38 mm) down from the top or crown of the cross section. The indentation shall be a minimum of 0.25 inch (6 mm) deep on each side and shall be at least 0.5 (13 mm) high. Edges within the handgrip shall have a minimum radius of 0.0625 inch (2 mm). The handrail surface shall be smooth with no cusps so as to avoid catching clothing or skin.

(27) In Section 1004.3.2.5 Exception 2 is deleted.

(28) New sections 1006.2.3, 1006.2.3.1 and 1006.2.3.2 are added as follows:

1006.2.3 Safe dispersal areas. Where approved by the code official, the exit discharge is permitted to lead to a safe dispersal area on the same property as the structure being discharged. The proximity and size of such safe dispersal area shall be based on such factors as the occupant load served, the mobility of occupants, the type of construction of the building, the fire protection systems installed in the building, the height of the building and the degree of hazard of the occupancy. In any case, the entire safe dispersal area shall be located not less than 50 feet (15 420 mm) from the structure served.

1006.2.3.1 School ground fences and gates. School grounds shall be permitted to be fenced and gates therein equipped with locks, provided safe dispersal areas are located between the school and fence with the entire dispersal area no less than 50 feet (15 420mm) from school buildings. Safe dispersal area capacity shall be determined by providing a minimum of 3 square feet (0.28 m<sup>2</sup>) of net clear area per occupant.

1006.2.3.2 Reviewing stands, grandstands and bleachers. Safe dispersal areas serving reviewing stands, grandstands and bleachers shall accommodate a number of persons equal to the total capacity of the stand or building served. Safe dispersal area capacity shall be determined by providing a minimum of 3 square feet (0.28 m<sup>2</sup>) of net clear area per occupant.

(29) Section 1207.2 is deleted and replaced with the following:

1207.2 Minimum ceiling heights. Occupiable spaces, habitable spaces and corridors shall have a ceiling height of not less than 7 feet 6 inches (2286 mm). Rooms in one- and two-family dwellings, bathrooms, toilet rooms, kitchens, storage rooms and laundry rooms shall be permitted to have a ceiling height of not less than 7 feet (2134 mm).

Exceptions:

1. In one- and two-family dwellings, beams or girders spaced not more than 4 feet (1219 mm) on center or projecting not more than 6 inches (152 mm) below the required ceiling height.

2. Basement rooms without habitable spaces in one- and two-family dwellings having a ceiling height of not less than 6 feet 8 inches (2033mm) with not less than 6 feet 4 inches (1932 mm) of clear height under beams, girders, ducts and similar obstructions.

3. If any room in a building has a sloping ceiling, the prescribed ceiling height for the room is required in one-half the area thereof. Any portion of the room measuring less than 5 feet (1524 mm) from the finished floor to the finished ceiling shall not be included in any computation of the minimum area thereof.

4. Mezzanines constructed in accordance with Section 505.1.

(30) Section 1207.3 is deleted and replaced with the following:

1207.3 Room area. Every dwelling unit shall have at least one room that shall have not less than 120 square feet (11.2 m<sup>2</sup>) of net floor area. Other habitable rooms shall have a net floor area of not less than 70 square feet (6.5 m<sup>2</sup>).

Exception: Every kitchen in a one- and two-family dwelling shall have not less than 50 square feet 4.64 m<sup>2</sup>) of gross floor area.

(31) Section 1207.4 subparagraph 1 is deleted and replaced with the following:

1. The unit shall have a living room of not less than 165 square feet (15.3 m) of floor area. An additional 100 square feet (9.3 m) of floor area shall be provided for each occupant of such unit in excess of two.

(32) In Section 1605.2.1, the formula shown as " $f_2 = 0.2$  for other roof configurations" is deleted and replaced with the following:

$f_2 = 0.20 + .025(A-5)$  for other configurations where roof snow load exceeds 30 psf

$f_2 = 0$  for roof snow loads of 30 psf (1.44kN/m<sup>2</sup>) or less.

Where A = Elevation above sea level at the location of the structure (ft/1000).

(33) In Section 1605.3.1 and section 1605.3.2, Exception number 2 in each section is deleted and replaced with the following:

Falt roof snow loads of 30 pounds per square foot (1.44 kNm<sup>2</sup>) or less need not be combined with seismic loads. Where flat roofs exceed 30 pounds per square foot (1.44 kNm<sup>2</sup>), the snow loads may be reduced in accordance with the following in load combinations including both snow and seismic loads.

$$W_s = (0.20 + 0.025(A-5))P_f$$

Where

$W_s$  = Weight of snow to be included, psf

A = Elevation above sea level at the location of the structure (ft/1000)

$P_f$  = Design roof snow load, psf

(34) Section 1608.1 is deleted and replaced with the following:

Except as modified in section 1608.1.1, design snow loads shall be determined in accordance with Section 7 of ASCE 7, but the design roof load shall not be less than that determined by Section 1607.

(35) Section 1608.1.1 is added as follows:

1608.1.1 Utah Snow Loads. The ground snow load,  $P_g$ , to be used in the determination of design snow loads for buildings and other structures shall be determined by using the following formula:  $P_g = (P_o^2 + S^2(A-A_o)^2)^{0.5}$  for A greater than  $A_o$ , and  $P_g = P_o$  for A less than or equal to  $A_o$ .

WHERE

$P_g$  = Ground snow load at a given elevation (psf)

$P_o$  = Base ground snow load (psf) from Table No. 1608.1.1(a)

S = Change in ground snow load with elevation (psf/100 ft.) From Table No. 1608.1.1(a)

A = Elevation above sea level at the site (ft./1000)

$A_o$  = Base ground snow elevation from Table 1608.1.1(a) (ft./1000)

The building official may round the roof snow load to the nearest 5 psf. The ground snow load,  $P_g$ , may be adjusted by the building official when a licensed engineer or architect submits data substantiating the adjustments. A record of such action together with the substantiating data shall be provided to the division for a permanent record.

The building official may also directly adopt roof snow loads in accordance with Table 1608.1.1(b), provided the site is no more than 100 ft. higher than the listed elevation.

Where the minimum roof live load in accordance with section 1607.11 is greater than the design roof snow load, such roof live load shall be used for design, however, it shall not be reduced to a load lower than the design roof snow load. Drifting need not be considered for roof snow loads less than 20 psf.

(36) Table 1608.1.1(a) and Table 1608.1.1(b) are added as follows:

TABLE NO. 1608.1.1(a)  
STATE OF UTAH - REGIONAL SNOW LOAD FACTORS

COUNTY	$P_o$	S	$A_o$
--------	-------	---	-------

Beaver	43	63	6.2
Box Elder	43	63	5.2
Cache	50	63	4.5
Carbon	43	63	5.2
Daggett	43	63	6.5
Davis	43	63	4.5
Duchesne	43	63	6.5
Emery	43	63	6.0
Garfield	43	63	6.0
Grand	36	63	6.5
Iron	43	63	5.8
Juab	43	63	5.2
Kane	36	63	5.7
Millard	43	63	5.3
Morgan	57	63	4.5
Piute	43	63	6.2
Rich	57	63	4.1
Salt Lake	43	63	4.5
San Juan	43	63	6.5
Sanpete	43	63	5.2
Sevier	43	63	6.0
Summit	86	63	5.0
Tooele	43	63	4.5
Uintah	43	63	7.0
Utah	43	63	4.5
Wasatch	86	63	5.0
Washington	29	63	6.0
Wayne	36	63	6.5
Weber	43	63	4.5

TABLE NO. 1608.1.1(b)  
RECOMMENDED SNOW LOADS FOR SELECTED UTAH CITIES AND TOWNS

		Roof Snow Load (PSF)	Ground Snow Load (PSF)
Beaver County			
Beaver	5920 ft.	43	62
Box Elder County			
Brigham City	4300 ft.	30	43
Tremonton	4290 ft.	30	43
Cache County			
Logan	4530 ft.	35	50
Smithfield	4595 ft.	35	50
Carbon County			
Price	5550 ft.	30	43
Daggett County			
Manila	5377 ft.	30	43
Davis County			
Bountiful	4300 ft.	30	43
Farmington	4270 ft.	30	43
Layton	4400 ft.	30	43
Fruit Heights	4500 ft.	40	57
Duchesne County			
Duchesne	5510 ft.	30	43
Roosevelt	5104 ft.	30	43

Emery County				
Castledale	5660 ft.	30		43
Green River	4070 ft.	25		36
Garfield County				
Panguitch	6600 ft.	30		43
Grand County				
Moab	3965 ft.	25		36
Iron County				
Cedar City	5831 ft.	30		43
Juab County				
Nephi	5130 ft.	30		43
Kane County				
Kanab	5000 ft.	25		36
Millard County				
Millard	5000 ft.	30		43
Delta	4623 ft.	30		43
Morgan County				
Morgan	5064 ft.	40		57
Piute County				
Piute	5996 ft.	30		43
Rich County				
Woodruff	6315 ft.	40		57
Salt Lake County				
Murray	4325 ft.	30		43
Salt Lake City	4300 ft.	30		43
Sandy	4500 ft.	30		43
West Jordan	4375 ft.	30		43
West Valley	4250 ft.	30		43
San Juan County				
Blanding	6200 ft.	30		43
Monticello	6820 ft.	35		50
Sanpete County				
Fairview	6750 ft.	35		50
Mt. Pleasant	5900 ft.	30		43
Manti	5740 ft.	30		43
Ephraim	5540 ft.	30		43
Gunnison	5145 ft.	30		43
Sevier County				
Salina	5130 ft.	30		43
Richfield	5270 ft.	30		43
Summit County				
Coalville	5600 ft.	60		86
Kamas	6500 ft.	70		100
Park City	6400 ft.	85		121
Summit Park	7200 ft.	90		128
Tooele County				
Tooele	5100 ft.	30		43
Uintah County				
Vernal	5280 ft.	30		43
Utah County				
American Fork	4500 ft.	30		43
Orem	4650 ft.	30		43
Pleasant Grove	5000 ft.	30		43
Provo	5000 ft.	30		43
Spanish Fork	4720 ft.	30		43
Wasatch County				
Heber	5630 ft.	60		86

Washington County

Central	5209 ft.	25	36
Dameron	4550 ft.	25	36
Leeds	3460 ft.	20	29
Rockville	3700 ft.	25	36
Santa Clara	2850 ft.	15 (1)	21
St. George	2750 ft.	15 (1)	21

Wayne County

Loa	7080 ft.	30	43
Hanksville	4308 ft.	25	36

Weber County

North Ogden	4500 ft.	40	57
Ogden	4350 ft.	30	43

NOTES

(1) The IBC requires a minimum live load - See 1607.11.2.

(37) Section 1608.2 is deleted and replaced with the following:

1608.2 Ground Snow Loads. The ground snow loads to be used in determining the design snow loads for roofs in states other than Utah are given in Figure 1608.2 for the contiguous United States and Table 1608.2 for Alaska. Site-specific case studies shall be made in areas designated CS in figure 1608.2. Ground snow loads for sites at elevations above the limits indicated in Figure 1608.2 and for all sites within the CS areas shall be approved. Ground snow load determination for such sites shall be based on an extreme value statistical analysis of data available in the vicinity of the site using a value with a 2-percent annual probability of being exceeded (50-year mean recurrence interval). Snow loads are zero for Hawaii, except in mountainous regions as approved by the building official.

(38) Section 1614.2 is deleted and replaced with the following:

1614.2 Change in Occupancy. When a change of occupancy results in a structure being reclassified to a higher Seismic Use Group, or when such change of occupancy results in a design occupant load increase of 100% or more, the structure shall conform to the seismic requirements for a new structure.

Exceptions:

1. This is not required if the design occupant load increase is less than 25 persons and the Seismic Use Group does not change.

2. Specific detailing provisions required for a new structure are not required to be met where it can be shown an equivalent level of performance and seismic safety contemplated for a new structure is obtained. Such analysis shall consider the regularity, overstrength, redundancy and ductility of the structure within the context of the specific detailing provided. Alternatively, the building official may allow the structure to be upgraded in accordance with the latest edition of the "Guidelines for Seismic Rehabilitation of Existing Buildings" or another nationally recognized standard for retrofit of existing buildings.

(39) In Section 1616.4.1, Definition of  $W$ , Item 4 is deleted and replaced with the following:

4. Roof snow loads of 30 psf or less need not be included. Where the roof snow load exceeds 30 psf, the snow load shall be included, but may be adjusted in accordance with the following formula:  $W_s = (0.20 + 0.025(A-5))P_f$

WHERE:

$W_s$  = Weight of snow to be included in seismic calculation;

$A$  = Elevation above sea level at the location of the structure (ft/1000)

$P_f$  = Design roof snow load, psf

For the purposes of this section, snow load shall be assumed uniform on the roof footprint without including the effects of drift or sliding.

(40) In Section 1617.2.2, the fourth definition of  $r_{maxi}$  is deleted and replaced with the following:

=For shear walls,  $r_{maxi}$  shall be taken as the maximum value of the product of the shear in the wall or wall pier and  $10/l_w$  ( $3.3/l_w$  for SI), divided by the story shear, where  $l_w$  is the

length of the wall or wall pier in feet (m). The ratio  $10/l_w$  need not be taken greater than 1.0 for buildings of light frame construction.

(41) In Section 1617.4.1, Definition of W, Item 4 is deleted and replaced with the following:

4. Roof snow loads to be included shall be as outlined in section 1616.4.1, Definition of W, Item 4, as amended.

(42) In Section 1617.5.1, Definition of W, Item 4 is deleted and replaced with the following:

4. Roof snow loads to be included shall be as outlined in section 1616.4.1, Definition of W, Item 4, as amended.

(43) In Section 1618.4, Definition of W, Item 4 is deleted and replaced with the following:

4. Roof snow loads to be included shall be as outlined in section 1616.4.1, Definition of W, Item 4, as amended.

(44) Section 1805.5 is deleted and replaced with the following:

1805.5 Foundation walls. Concrete and masonry foundation walls shall be designed in accordance with Chapter 19 or 21. Foundation walls that are laterally supported at the top and bottom and within the parameters of Tables 1805.5(1) through 1805.5(4) are permitted to be designed and constructed in accordance with Sections 1805.5.1 through 1805.5.4 and 1805.5.8 through 1805.5.8.2. Concrete foundation walls may also be constructed in accordance with Section 1805.5.9.

(45) New sections 1805.5.8, 1805.5.8.1 1805.5.8.2 and 1805.5.9 are added as follows:

1805.5.8 Seismic requirements. Tables 1805.5(1) through 1805.5(4) shall be subject to the following limitations based on the seismic design category assigned to the structure as defined in Section 1616.

1805.5.8.1 Seismic requirements for concrete foundation walls. Concrete foundation walls constructed using Tables 1805.5(1) through 1805.5(4) shall be subject to the following:

1. Seismic Design Category A and B. Provide two No. 5 bars around window and door openings. Such bars shall extend at least 24 inches (610 mm) beyond the corners of the openings.

2. Seismic Design Category C. Tables shall not be used except as permitted for plain concrete members in Section 1910.4.

3. Seismic Design Categories D, E and F. Tables shall not be used except as allowed for plain concrete members in ACI 318, Section 22.10.

1805.5.1.2. Seismic requirements for masonry foundation walls. Masonry foundation walls constructed using Tables 1805.5(1) through 1805.5(4) shall be subject to the following:

1. Seismic Design Category A and B. No additional seismic requirements.

2. Seismic Design Category C. The requirements of Section 2106.4 shall apply.

3. Seismic Design Category D. The requirements of Section 2106.5 shall apply.

4. Seismic Design Categories E and F. The requirements of Section 2106.6 shall apply.

1805.5.9 Empirical foundation design. Group R, Division 3 Occupancies three stories or less in height, and Group U Occupancies, which are constructed in accordance with Section 2308, or with other methods employing repetitive wood-frame construction or repetitive cold-formed steel structural member construction, shall be permitted to have concrete foundations constructed in accordance with Table 1805.5.9.

(46) Table 1805.5.9 is added as follows:

TABLE 1805.5.9  
Empirical Foundation Walls (1,8)

Max.	2'	4'	6'	8'	9'	Over 9'
Height	(610 mm)	(1219 mm)	(1829 mm)	(2438 mm)	(2743 mm)	(2743 mm)
Top Edge	None	None	Floor	Same	Same	Engi-
Support			or	as	as	neering
			roof	6'	6'	required
			dia-			

phragm(6)

Minimum Thickness	6"	6"	8"	8"	8"	Same as above
Vertical Note Steel(2)	(5)	#4 @ 32"	#4 @ 24"	#4 @ 24"	#4 @ 16"	Same as above
Horizontal Steel(3)	2-#4 Bars	4-#4 Bars	5-#4 Bars	6-#4 Bars	7-#4 Bars	Same as above
Steel at Openings(4)	2-#4 Bars above; 1-#4 Bar each side 1-#4 Bar below	2-#4 Bars above; 1-#4 Bar each side 1-#4 Bar below	2-#4 Bars above; 1-#4 Bar each side 1-#4 Bar below	2-#4 Bars above; 1-#4 Bar each side 1-#4 Bar below	2-#4 Bars above; 1-#4 Bar each side 1-#4 Bar below	Same as above
Max. Lintel Length	2' (610mm)	3' (914mm)	6' (1829mm)	6' (1829mm)	6' (1829mm)	Same as above
Min. Lintel Depth	2" for each ft. of opening width; Min. 6"	Same as 2'	Same as 2'	Same as 2'	Same as 2'	Same as above

Notes:

- (1) Based on 3,000 psi (20.6 Mpa) concrete and 60,000 psi (414 Mpa) reinforcing steel.
- (2) To be placed in the center of the wall, and extend from the footing to within three inches (76 mm) of the top of the wall; dowels of #4 bars to match vertical steel placement shall be provided in the footing, extending 24 inches (610 mm) into the foundation wall.
- (3) One bar shall be located in the top four inches (102 mm), one bar in the bottom four inches (102 mm) and the other bars equally spaced between. Such bar placement satisfies the requirements of Section 1805.9. Corner reinforcing shall be provided so as to lap 24 inches (610 mm).
- (4) Bars shall be placed within two inches (51 mm) of the openings and extend 24 inches (610 mm) beyond the edge of the opening; vertical bars may terminate three inches (76 mm) from the top of the concrete.
- (5) Dowels of #4 bar at 32 inches on center shall be provided in the footing, extending 18 inches (457 mm) into the foundation wall.
- (6) Diaphragm shall conform to the requirements of Section 2308.
- (7) Footing shall be a minimum of nine inches thick by 20 inches wide.
- (8) Soil backfill shall be soil classification types GW, GP, SW, or PS, per Table 1610.1. Soil shall be submerged or saturated in groundwater.
- (47) A new section 2902.1.1 is added as follows:  
2902.1.1 Unisex toilets and bath fixtures. Fixtures located within unisex toilet and bathing rooms complying with section 2902 are permitted to be included in determining the minimum number of fixtures for assembly and mercantile occupancies.
- (48) A new section 2306.1.4 is added as follows:  
2306.1.4 The allowable stress increase of 1.15 for snow load, shown in Table 2.3.2, Load Duration Factors,  $C_d$ , of the National Design Specifications, shall not be utilized at

elevations above 5,000 feet (1524 M).

(49) Section 2308.6 is deleted and replaced with the following:

2308.6 Foundation plates or sills. Foundations and footings shall be as specified in Chapter 18. Foundation plates or sills resting on concrete or masonry foundations shall comply with Section 2304.3.1 and shall be bolted or anchored by one of the following:

1. Foundation plates or sill shall be bolted or anchored to the foundation with not less than 1/2 inch (12.7 mm) diameter steel bolts or approved anchors. Bolts shall be embedded at least 7 inches (178 mm) into concrete or masonry, and spaced not more than 6 feet (1829 mm) apart. There shall be a minimum of two bolts or anchor straps per piece with one bolt or anchor strap located not more than 12 inches (305 mm) or less than 4 inches (102 mm) from each end of each piece.

2. Foundation plates or sills shall be bolted or anchored to the foundation with not less than 1/2 inch (12.7 mm) diameter steel bolts or approved anchors. Bolts shall be embedded at least 7 inches (178 mm) into concrete or masonry, and spaced not more than 32 inches (816 mm) apart. There shall be a minimum of two bolts or anchor straps per piece located not less than 4 inches (102 mm) from each end of each piece.

A properly sized nut and washer shall be tightened on each bolt to the plate.

(50) A new section 3402.5 is added as follows:

3402.5 Parapets and other appendages. Building constructed prior to 1975 with parapet walls, cornices, spires, towers, tanks, signs, statuary and other appendages shall have such appendages evaluated by a licensed engineer to determine resistance to design loads specified in this code when said building is undergoing reroofing, or alteration of or repair to said feature.

EXCEPTION: Group R-3 an U occupancies.

Original Plans and/or structural calculations may be utilized to demonstrate that the parapet or appendages are structurally adequate. When found to be deficient because of design or deteriorated condition, the engineer shall prepare specific recommendations to anchor, brace, reinforce or remove the deficient feature.

The maximum height of an unreinforced masonry parapet above the level of the diaphragm tension anchors or above the parapet braces shall not exceed one and one-half times the thickness of the parapet wall. The parapet height may be a maximum of two and one-half times its thickness in other than Seismic Design Categories D, E, or F. If the required parapet height exceeds this maximum height, a bracing system designed using the coefficients specified in Table 1621.2 shall support the top of the parapet. When positive diaphragm connections are absent, tension roof anchors shall be added. Approved alternative methods of equivalent strength will be considered when accompanied by engineer sealed drawings, details and calculations.

(51) Section 3408.1 is deleted and replaced with the following:

3408.1 Scope: The provision of sections 3408.2 through 3408.5 apply to maintenance, change of occupancy, additions and alterations to existing buildings, including those identified as historic buildings.

Exceptions:

1. When maintenance, additions or alteration occur, Type B dwelling units required by section 1107.5.4 are not required to be provided in existing buildings and facilities.

2. When a change of occupancy in a building or portion of a building results in multiple dwelling units as determined in section 1107.5.4, not less than 20 percent of the dwelling units shall be Type B dwelling units. These dwelling units may be located on any floor of the building provided with an accessible route. Two percent, but not less than one, of the dwelling units shall be Type A dwelling units.

(52) Referenced standards number 1557-91 under ASTM in chapter 35 is deleted and replaced with the following:

TABLE

Standard Number	Title	Code Section
D1557-91 E01	Laboratory Compaction	1508.15.2
	Characteristics of soil	K1.1.2,
	using Modified Effort	K1.7.5

(53) A new appendix K, Grading, is added as follows:

#### APPENDIX K - GRADING

##### K1.1 GENERAL

K1.1.1 Scope. The provisions of this chapter apply to grading, excavation and earthwork construction, including fills and embankments. Where conflicts occur between the technical requirements of this chapter and the soils report, the soils report shall govern.

K1.1.2 Standards. The following standards of quality shall apply:

1. ASTM D1557-91 E01, Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lb/ft).

##### K1.2 DEFINITIONS

K1.2.1 Definitions. For the purposes of this appendix chapter, the terms, phrases and words listed in this section and their derivatives shall have the indicated meanings.

BENCH. A relatively level step excavated into earth material on which fill is to be placed.

COMPACTION. The densification of a fill by mechanical means.

CUT. See Excavation.

DOWN DRAIN. A device for collecting water from a swale or ditch located on or above a slope, and safely delivering it to an approved drainage facility.

EROSION. The wearing away of the ground surface as a result of the movement of wind, water or ice.

EXCAVATION. The removal of earth material by artificial means, also referred to as a cut.

FILL. Deposition of earth materials by artificial means.

GRADE. The vertical location of the ground surface.

GRADE, EXISTING. The grade prior to grading.

GRADE, FINISHED. The grade of the site at the conclusion of all grading efforts.

GRADING. An excavation or fill or combination thereof.

KEY. A compacted fill placed in a trench excavated in earth material beneath the toe of a slope.

SLOPE. An inclined surface, the inclination of which is expressed as a ratio of horizontal distance to vertical distance.

TERRACE. A relatively level step constructed in the face of a graded slope for drainage and maintenance purposes.

##### K1.3 PERMITS REQUIRED

K1.3.1 Permits required. Except as exempted in Section K1.3.2, no grading shall be performed without first having obtained a permit therefor from the building official. A grading permit does not include the construction of retaining walls or other structures.

K1.3.2 Exemptions. A grading permit shall not be required for the following:

1. Grading in an isolated, self-contained area, provided there is no danger to the public, and that such grading will not adversely affect adjoining properties.
2. Excavation for construction of a structure permitted under this code.
3. Cemetery graves.
4. Refuse disposal sites controlled by other regulations.
5. Excavations for wells, or trenches for utilities.
6. Mining, quarrying, excavating, processing or stockpiling rock, sand, gravel, aggregate or clay controlled by other regulations, provided such operations do not affect the lateral support of, or significantly increase stresses in, soil on adjoining properties.
7. Exploratory excavations performed under the direction of a registered design professional for the sole purpose of preparing a soils report.

Exemption from the permit requirements of this appendix shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction. The listed exemptions shall not apply to areas located in a floodway or floodplain regulated under Appendix G.

##### K1.4 PERMIT APPLICATION AND SUBMITTALS

K1.4.1 Submittal requirements. In addition to the provisions of Section 105.3, the applicant shall state the estimated quantities of excavation and fill.

K1.4.2 Site plan requirements. In addition to the provisions of Section 106, a grading plan shall show the existing grade and finished grade in contour intervals of sufficient clarity to indicate the nature and extent of the work and show in detail that it complies with the requirements of this code. The plans shall show the existing grade on adjoining properties in sufficient detail to identify how grade changes will conform to the requirements of this code.

K1.4.3 Soils report. A soils report prepared by registered design professionals shall be provided which shall identify the nature and distribution of existing soils; conclusions and recommendations for grading procedures; soil design criteria for any structures or embankments required to accomplish the proposed grading; and, where necessary, slope stability studies, and recommendations and conclusions regarding site geology.

Exception: A soils report is not required where the building official determines that the nature of the work applied for is such that a report is not necessary.

K1.4.4 Liquefaction study. For sites with mapped maximum considered earthquake spectral response accelerations at short period ( $S_s$ ) greater than 0.5g as determined by Section 1615, a study of the liquefaction potential of the site shall be provided, and the recommendations incorporated in the plans.

Exception: A liquefaction study is not required where the building official determines from established local data that the liquefaction potential is low.

#### K1.5 INSPECTIONS

K1.5.1 General. Inspections shall be governed by Section 109 of this code.

K1.5.2 Special inspections. The special inspection requirements of Section 1704.7 shall apply to work performed under a grading permit where required by the building official.

#### K1.6 EXCAVATIONS

K1.6.1 Maximum slope. The slope of cut surfaces shall be no steeper than is safe for the intended use, and shall be no steeper than 2 horizontal to 1 vertical (50%) unless the applicant furnishes a soils report justifying a steeper slope.

##### Exceptions:

1. A cut surface may be at a slope of 1.5 horizontal to 1 vertical (67%) provided that all the following are met:
  - (a) it is not intended to support structures or surcharges;
  - (b) it is adequately protected against erosion;
  - (c) it is no more than 8 feet (2438 mm) in height; and
  - (d) it is approved by the building official.

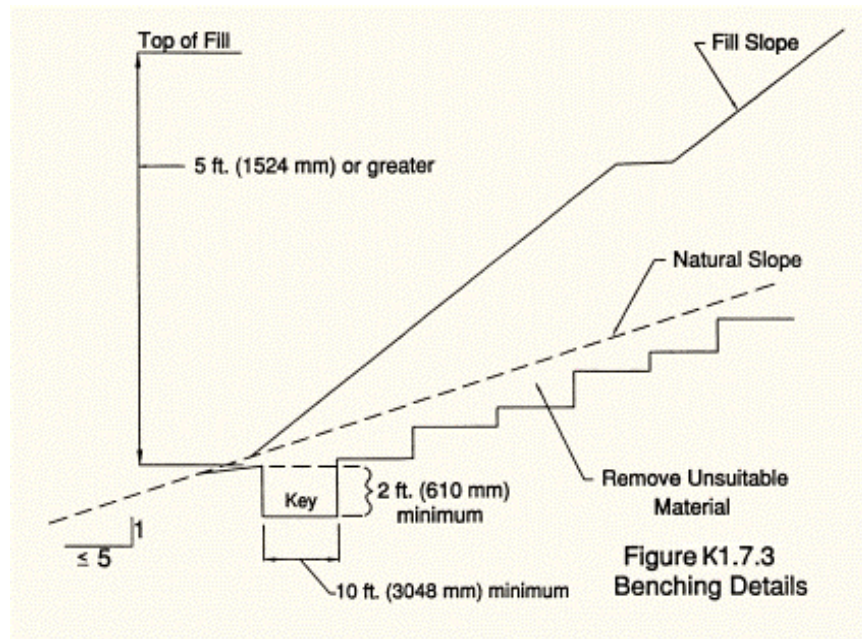
2. A cut surface in bedrock shall be permitted to be at a slope of 1 horizontal to 1 vertical (100%)

#### K1.7 FILLS

K1.7.1 General. Unless otherwise recommended in the soils report, fills shall conform to provisions of this section.

K1.7.2 Surface preparation. The ground surface shall be prepared to receive fill by removing vegetation, topsoil and other unsuitable materials, and scarifying the ground to provide a bond with the fill material.

K1.7.3 Benching. Where existing grade is at a slope steeper than 5 horizontal to 1 vertical (20%) and the depth of the fill exceeds five feet (1524 mm) benching shall be provided in accordance with Figure K1.7.3 dated July 1, 2001, published by State and Local Building Codes Amendments, Department of Commerce, Division of Occupational and Professional Licensing, which is hereby adopted and incorporated by reference. A key shall be provided which is at least 10 feet (3048 mm) in width and two feet (610 mm) in depth.



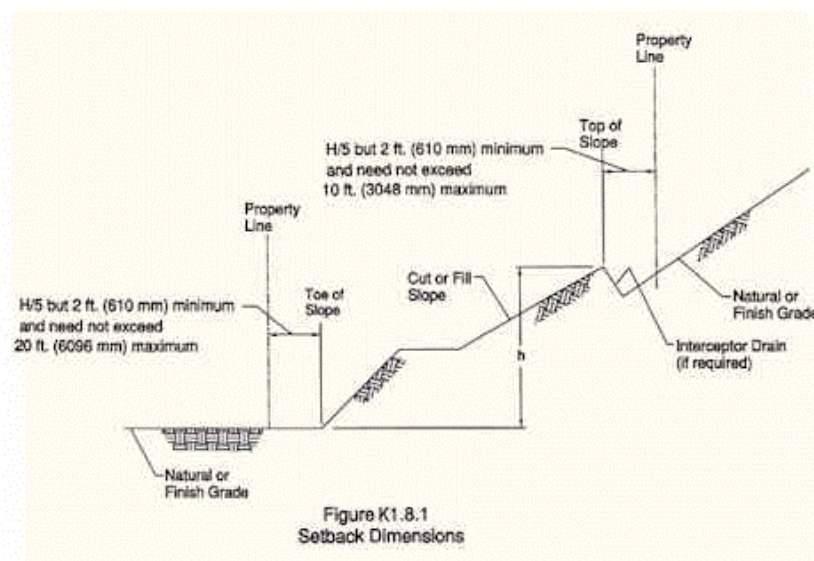
K1.7.4 Fill material. Fill material shall not include organic, frozen or other deleterious materials. No rock or similar irreducible material greater than 12 inches (305mm) in any dimension shall be included in fills.

K1.7.5 Compaction. All fill material shall be compacted to 90% of maximum density as determined by ASTM D1557, Modified Proctor, in lifts not exceeding 12 inches (305 mm) in depth.

K1.7.6 Maximum slope. The slope of fill surfaces shall be no steeper than is safe for the intended use. Fill slopes steeper than 2 horizontal to 1 vertical (50%) shall be justified by soils reports or engineering data.

#### K1.8 SETBACKS

K1.8.1 General. Cut and fill slopes shall be set back from the property lines in accordance with this section. Setback dimensions shall be measured perpendicular to the property line and shall be as shown in Figure K1.8.1, dated July 1, 2001, published by State and Local Building Codes Amendments, Department of Commerce, Division of Occupational and Professional Licensing, which is hereby adopted and incorporated by reference. unless substantiating data is submitted justifying reduced setbacks.



K1.8.2 Top of slope. The setback at the top of a cut slope shall not be less than that shown in Figure K1.8.1, or than is required to accommodate any required interceptor drains, whichever is greater.

K1.8.3 Slope protection. Where required to protect adjacent properties at the toe of a slope from adverse effects of the grading, additional protection, approved by the building official, shall be included. Such protection may include but shall not be limited to:

1. Setbacks greater than those required by Figure K1.8.1.
2. Provisions for retaining walls or similar construction.
3. Erosion protection of the fill slopes.
4. Provision for the control of surface waters.

#### K1.9 DRAINAGE AND TERRACING

K1.9.1 General. Unless otherwise recommended by a registered design professional, drainage facilities and terracing shall be provided in accordance with the requirements of this section.

Exception: Drainage facilities and terracing need not be provided where the ground slope is not steeper than 3 horizontal to 1 vertical (33%).

K1.9.2 Terraces. Terraces at least six feet (1829 mm) in width shall be established at not more than 30-foot (9144 mm) vertical intervals on all cut or fill slopes to control surface drainage and debris. Suitable access shall be provided to allow for cleaning and maintenance.

Where more than two terraces are required, one terrace, located at approximately mid-height, shall be at least 12 feet (3658 mm) in width.

Swales or ditches shall be provided on terraces. They shall have a minimum gradient of 20 horizontal to 1 vertical (5%) and shall be paved with concrete not less than three inches (76 mm) in thickness, or with other materials suitable to the application. They shall have a minimum depth of 12 inches (305 mm) and a minimum width of five feet (1524 mm).

A single run of swale or ditch shall not collect runoff from a tributary area exceeding 13,500 square feet (1256 m<sup>2</sup>) (projected) without discharging into a down drain.

K1.9.3 Interceptor drains. Interceptor drains shall be installed along the top of cut slopes receiving drainage from a tributary width greater than 40 feet, measured horizontally.

They shall have a minimum depth of one foot (305 mm) and a minimum width of three feet (915 mm). The slope shall be approved by the building official, but shall not be less than 50 horizontal to 1 vertical (2%). The drain shall be paved with concrete not less than three inches (76 mm) in thickness, or by other materials suitable to the application. Discharge from the drain shall be accomplished in a manner to prevent erosion and shall be approved by the building official.

K1.9.4 Drainage across property lines. Drainage across property lines shall not exceed that which existed prior to grading. Excess or concentrated drainage shall be contained on site or directed to an approved drainage facility. Erosion of the ground in the area of discharge shall be prevented by installation of non-erosive down drains or other devices.

#### K1.10 EROSION CONTROL

K1.10.1 General. The faces of cut and fill slopes shall be prepared and maintained to control erosion. This control shall be permitted to consist of effective planting.

Exception: Erosion control measures need not be provided on cut slopes not subject to erosion due to the erosion-resistant character of the materials.

Erosion control for the slopes shall be installed as soon as practicable and prior to calling for final inspection.

K1.10.2 Other devices. Where necessary, check dams, cribbing, riprap or other devices or methods shall be employed to control erosion and provide safety.

#### R156-56-705. Local Amendments to the IBC.

The following are adopted as amendments to the IBC to be applicable to the following jurisdictions:

- (1) City of Farmington:

Section 903.2.16 is adopted as follows:

903.2.16 Group R, Division 3 Occupancies. An automatic sprinkler system shall be installed throughout every dwelling in accordance with NFPA 13-D, when any of the following conditions are present:

1. The structure is over two stories high, as defined by the building code;
2. The nearest point of structure is more than 150 feet from the public way;
3. The total floor area of all stories is over 5,000 square feet (excluding from the calculation the area of the basement and/or garage); or
4. The structure is located on a street constructed after March 1, 2000 that has a gradient over 12% and, during fire department response, access to the structure will be gained by using such street. (If the access is intended to be from a direction where the steep gradient is not used, as determined by the Chief, this criteria shall not apply).

Such sprinkler system shall be installed in basements, but need not be installed in garages, under eaves or in enclosed attic spaces, unless required by the Chief.

(2) City of North Salt Lake

Section 903.2.16 is adopted as follows:

903.2.16 Group R, Division 3 Occupancies. An automatic sprinkler system shall be installed throughout every dwelling in accordance with NFPA 13-D, when the following condition is present:

1. The structure is over 6,200 square feet.

Such sprinkler system shall be installed in basements, but need not be installed in garages, under eaves, or in enclosed attic spaces, unless required by the fire chief.

(3) Park City Corporation:

Section 903.2 is deleted and replaced with the following:

903.2 Where required. Approved automatic sprinkler systems in new buildings and structures shall be provided in the location described in this section.

All new construction having more than 6,000 square feet on any one floor, except R-3 occupancy.

All new construction having more than two (2) stories, except R-3 occupancy.

All new construction having three (3) or more dwelling units, including units rented or leased, and including condominiums or other separate ownership.

All new construction in the Historic Commercial Business zone district, regardless of occupancy.

All new construction and buildings in the General Commercial zone district where there are side yard setbacks or where one or more side yard setbacks is less than two and one half (2.5) feet per story of height.

All existing building within the Historic District Commercial Business zone.

In Section 1505.1, the following is added as footnote d:

d. Wood roof covering is prohibited in areas with a combined rating of more than 11 using the following tables with a score of 9 for weather factors.

TABLE  
WILDFIRE HAZARD SEVERITY SCALE

RATING	SLOPE	VEGETATION
1	less than or equal to 10%	Pinion-juniper
2	10.1 - 20%	Grass-sagebrush
3	greater than 20%	Mountain brush or softwoods

PROHIBITION/EXEMPTION TABLE

RATING	WOOD ROOF PROHIBITION
less than or equal to 11	wood roofs are allowed
greater than or equal to 12	wood roofs are prohibited

Appendix C is adopted.

R156-56-706. Statewide Amendments to the NEC.

The following are adopted as amendments to the NEC to be applicable statewide:

- (1) Section 250-104(b) is deleted and replaced with the following:

Section 250-104(b) Metal Gas Piping. Each above ground portion of a gas piping system upstream from the equipment shutoff valve shall be electrically continuous and bonded to the grounding electrode system.

The bonding jumper shall be sized in accordance with Table 250-122 using the rating of the circuit that may energize the piping. The equipment grounding conductor for the circuit that may energize the piping shall be permitted to serve as the bonding means. Where the circuit that may energize the piping cannot be identified or where the bonding jumper is exposed to physical damage, the minimum size bonding jumper shall be No. 8 solid copper.

R156-56-707. Statewide Amendments to the IPC.

The following are adopted as amendments to the IPC to be applicable statewide:

- (1) In Section 202, the definition for "Backflow Backpressure, Low Head" is deleted in its entirety.

- (2) In Section 202, the definition for "Backsiphonage" is deleted and replaced with the following:

Backsiphonage. The backflow of potentially contaminated, polluted or used water into the potable water system as a result of the pressure in the potable water system falling below atmospheric pressure of the plumbing fixtures, pools, tanks or vats connected to the potable water distribution piping.

- (3) In Section 202, the following definition is added:

Certified Backflow Preventer Assembly Tester. A person who has shown competence to test Backflow prevention assemblies to the satisfaction of the authority having jurisdiction under Subsection 19-4-104(4), Utah Code Ann. (1953), as amended.

- (4) In Section 202, the definition for "Cross Connection" is deleted and replaced with the following:

Cross Connection. Any physical connection or potential connection or arrangement between two otherwise separate piping systems, one of which contains potable water and the other either water of unknown or questionable safety or steam, gas or chemical, whereby there exists the possibility for flow from one system to the other, with the direction of flow depending on the pressure differential between the two systems (see "Backflow").

- (5) In Section 202, the following definition is added:

Heat Exchanger (Potable Water). A device to transfer heat between two physically separated fluids (liquid or steam), one of which is potable water.

- (6) In Section 202, the definition for "Potable Water" is deleted and replaced with the following:

Potable Water. Water free from impurities present in amounts sufficient to cause disease or harmful physiological effects and conforming to the Titles 19-4 and 19-5, Utah Code Ann. (1953), as amended and the regulations of the public health authority having jurisdiction.

- (7) In Section 202, the definition for "Water Heater" is deleted and replaced with the following:

Water Heater. A closed vessel in which water is heated by the combustion of fuels or electricity and is withdrawn for use external to the system at pressures not exceeding 160 psig (1100 kPa (gage)), including the apparatus by which heat is generated, and all controls and devices necessary to prevent water temperatures from exceeding 210 degrees Fahrenheit (99 degrees Celsius).

- (8) Section 305.10 is added as follows:

Section 305.10 Improper Connections. No drain, waste, or vent piping shall be drilled and tapped for the purpose of making connections.

- (9) Section 312.9 is deleted in its entirety and replaced with the following:

312.9 Backflow assembly testing. The premise owner or his designee shall have backflow prevention assemblies operation tested at the time of installation, repair and relocation and at least on an annual basis thereafter, or more frequently as required by the authority having jurisdiction. Testing shall be performed by a Certified Backflow Preventer Assembly Tester. The assemblies that are subject to this paragraph are the Spill Resistant Vacuum

Breaker, the Pressure Vacuum Breaker Assembly, the Double Check Backflow Prevention Assembly, the Double Check Detector Assembly Backflow Preventer, the Reduced Pressure Principle Backflow Preventer, and Reduced Pressure Detector Assembly, and the spring loaded check valve assembly described in Section 608.16.4.

(10) A new section 403.7 is added as follows:

403.7 Hand sink location. Hand sinks in commercial food establishments shall be located accessible to food preparation areas, food service areas, dishwashing areas, and toilet rooms in accordance with Rule R392-100, Utah Administrative Code. Hand sinks in child care facilities shall be installed in accordance with R430-100-21, Utah Administrative Code.

(11) Section 412.5 is added as follows:

412.5 Public toilet rooms. All public toilet rooms shall be equipped with at least one of the following:

1. one floor drain with a wall mounted hose bibb;
2. one floor drain with a deep seal trap; or
3. at least one emergency floor drain with trap primer.

(12) Section 418.1 is deleted and replaced with the following:

418.1 Approval. Sinks shall conform to ANSI Z124.6, ASME A112.19.1, ASME A112.19.2, ASME A112.19.3, ASME A112.19.4, ASME A112.19.9, CSA B45.1, CSA B45.2, CSA B45.3, CSA B45.4 or NSF 2.

(13) Section 502.4 is deleted in its entirety.

(14) Section 502.6 is deleted and replaced with the following:

502.6 Water Heater Seismic Bracing. Water heaters shall be anchored or strapped in the upper third of the appliance to resist a horizontal force equal to one third the operating weight of the water heater, acting in any horizontal direction, or in accordance with the appliance manufacturers recommendations.

(15) Section 504.6.2 is deleted and replaced with the following:

504.6.2 Material. Relief valve discharge piping shall be of those materials listed in Section 605.5 or shall be tested, rated and approved for such use in accordance with ASME A112.4.1. Piping from safety pan drains shall be of those material listed in Table 605.5 and Table 701.1.

(16) Section 504.7.1 is amended as follows:

The measurement of "3/4 inch" in the last sentence of the paragraph is replaced with the measurement "1 1/2 inch".

(17) Section 602.3 is deleted and replaced with the following:

602.3 Individual water supply. Where a potable public water supply is not available, individual sources of potable water supply shall be utilized provided that the source has been developed in accordance with Sections 73-3-1, 73-3-3, and 73-3-25, Utah Code Ann. (1953), as amended, as administered by the Department of Natural Resources, Division of Water Rights. In addition, the quality of the water shall be approved by the local health department having jurisdiction. The source shall supply sufficient quantity of water to comply with the requirements of this chapter.

(18) Sections 602.3.1, 602.3.2, 602.3.3, 602.3.4, 602.3.5 and 602.3.5.1 are deleted in their entirety.

(19) Section 604.4.1 is added as follows:

604.4.1 Metering faucets. Self closing or metering faucets shall provide a flow of water for at least 15 seconds without the need to reactivate the faucet.

(20) Section 606.2 is deleted and replaced with the following:

606.2 Location of shutoff valves. Shutoff valves shall be installed in the following locations:

1. On the fixture supply to each plumbing fixture.

Exceptions:

- A. bath tubs and showers.
- B. in individual guest rooms that are provided with unit shutoff valves in hotels, motels, boarding houses and similar occupancies.

2. On the water supply pipe to each appliance or mechanical equipment.

(21) Section 606.5 is deleted and replaced with the following:

606.5 Water pressure booster systems. Water pressure booster systems shall be provided as

required by Section 606.5.1 through 606.5.11.

(22) Section 606.5.11 is added as follows:

606.5.11 Prohibited installation. In no case shall a booster pump be allowed that will lower the pressure in the public main to less than 20 psi.

(23) In Section 608.1, the following sentence is added at the end of the paragraph:

Connection without an air gap between potable water piping and sewer-connected waste shall not exist under any condition.

(24) Table 608.1 is deleted and replaced with the following:

TABLE 608.1  
General Methods of Protection

Assembly (applicable standard)	Degree of Hazard	Application	Installation Criteria
Air Gap (ASME A112.1.2)	High or Low	Backsiphonage	See Table 608.15.1
Reduced Pressure Principle Backflow Preventer (AWWA C511, USC-FCCCHR, ASSE 1013 CSA CNA/CSA-B64.4) and Reduced Pressure Detector Assembly (ASSE 1047, USC- FCCCHR)	High or Low	Backpressure or Backsiphonage 1/2" - 16"	a. The bottom of each RP assembly shall be a minimum of 12 inches above the ground or floor. b. RP assemblies shall NOT be installed in a pit. c. The relief valve on each RP assembly shall not be directly connected to any waste disposal line, including sanitary sewer, storm drains, or vents. d. The assembly shall be installed in a horizontal position only unless listed or approved for vertical installation.
Double Check Backflow Prevention Assembly (AWWA C510, USC-FCCCHR, ASSE 1015) Double Check Detector Assembly Backflow Preventer (ASSE 1048, USC-FCCCHR)	Low	Backpressure or Backsiphonage 1/2" - 16"	a. If installed in a pit, the DC assembly shall be installed with a minimum of 12 inches of clearance between all sides of the vault including the floor and roof or ceiling with adequate room for testing and maintenance. b. Shall be installed in a horizontal

position unless  
listed or approved  
for vertical  
installation.

Pressure Vacuum Breaker Assembly (ASSE 1020, USC-FCCCHR)	High or Low	Backsiphonage 1/2" - 2"	<ul style="list-style-type: none"> <li>a. Shall not be installed in an area that could be subjected to backpressure or back drainage conditions.</li> <li>b. Shall be installed a minimum of 12 inches above all downstream piping and the highest point of use.</li> <li>c. Shall not be installed below ground or in a vault or pit.</li> <li>d. Shall be installed in a vertical position only.</li> </ul>
Spill Resistant Vacuum Breaker (ASSE 1056, USC-FCCCHR)	High or Low	Backsiphonage 1/4" - 2"	<ul style="list-style-type: none"> <li>a. Shall not be installed in an area that could be subjected to backpressure or back drainage conditions.</li> <li>b. Shall be installed a minimum of 12 inches above all downstream piping and the highest point of use.</li> <li>c. Shall not be installed below ground or in a vault or pit.</li> <li>d. Shall be installed in a vertical position only.</li> </ul>
Atmospheric Vacuum Breaker (ASSE 1001 USC-FCCCHR, CSA CAN/CSA-B64.1.1)	High or Low	Backsiphonage	<ul style="list-style-type: none"> <li>a. Shall not be installed in an area that could be subjected to backpressure or back drainage conditions.</li> <li>b. Shall not be installed where it may be subjected to continuous pressure</li> </ul>

- for more than 12 consecutive hours at any time.
- c. Shall be installed a minimum of six inches above all downstream piping and the highest point of use.
  - d. Shall be installed on the discharge (downstream) side of any valves.
  - e. The AVB shall be installed in a vertical position only.

General  
Installation  
Criteria

The assembly owner, when necessary, shall provide devices or structures to facilitate testing, repair, and/or maintenance and to insure the safety of the backflow technician. Assemblies shall not be installed more than five feet off the floor unless a permanent platform is installed.

The body of the assembly shall not be closer than 12 inches to any wall, ceiling or incumbrance, and shall be accessible for testing, repair and/or maintenance.

In cold climates, assemblies shall be protected from freezing by a means acceptable to the code official.

Assemblies shall be maintained as an intact assembly.

(25) Table 608.1.1 is added as follows:

TABLE 608.1.1  
Specialty Backflow Devices for low hazard use only

Device	Degree of Hazard	Application	Applicable Standard
Antisiphon-type Water Closet Flush Tank Ball Cock	Low	Backsiphonage	ASSE 1002 CSA CAN/ CSA-B125
Dual check valve Backflow Preventer	Low	Backsiphonage or Backpressure 1/4" - 1"	ASSE 1024
Backflow Preventer with Intermediate Atmospheric Vent	Low Residential Boiler	Backsiphonage or Backpressure 1/4" - 3/4"	ASSE 1012 CSA CAN/ CSA-B64.3
Dual check valve type Backflow Preventer for Carbonated Beverage Dispensers/Post Mix Type	Low	Backsiphonage or Backpressure 1/4" - 3/8"	ASSE 1032
Hose-connection Vacuum Breaker	Low	Backsiphonage 1/2", 3/4", 1"	ASSE 1011 CSA CAN/ CSA-B64.2
Vacuum Breaker Wall Hydrants, Frost-resistant, Automatic Draining Type	Low	Backsiphonage 3/4", 1"	ASSE 1019 CSA CAN/ CSA-B64.2.2
Laboratory Faucet Backflow Preventer	Low	Backsiphonage	ASSE 1035 CSA CAN/ CSA-B64.7
Hose Connection Backflow Preventer	Low	Backsiphonage 1/2" - 1"	ASSE 1052

Installation Guidelines: The above specialty devices shall be installed in accordance with their listing and the manufacturer's instructions and the specific provisions of this chapter.

(26) In Section 608.3.1, the following sentence is added at the end of the paragraph:  
All piping and hoses shall be installed below the atmospheric vacuum breaker.

(27) Section 608.7 is deleted in its entirety.

(28) In Section 608.8, the following sentence is added at the end of the paragraph:  
In addition each nonpotable water outlet shall be labeled with the words "CAUTION: UNSAFE WATER, DO NOT DRINK".

(29) In Section 608.11, the following sentence is added at the end of the paragraph:  
The coating shall conform to NSF Standard 61 and application of the coating shall comply with the manufacturers instructions.

(30) Section 608.13.3 is deleted and replaced with the following:

608.13.3 Backflow preventer with intermediate atmospheric vent. Backflow preventers with intermediate atmospheric vents shall conform to ASSE 1012 or CAS CAN/CAS-B64.3. These devices shall be permitted to be installed on residential boilers only where subject to continuous pressure conditions. The relief opening shall discharge by air gap and shall be prevented from being submerged.

(31) Section 608.13.4 is deleted in its entirety.

(32) Section 608.15.3 is deleted and replaced with the following:

608.15.3 Protection by a backflow preventer with intermediate atmospheric vent. Opening and outlets to residential boilers only shall be protected by a backflow preventer with an intermediate atmospheric vent.

(33) Section 608.15.4 is deleted and replaced with the following:

608.15.4 Protection by a vacuum breaker. Openings and outlets shall be protected by atmospheric-type or pressure-type vacuum breakers. The critical level of the atmospheric vacuum breaker shall be set a minimum of 6 inches (152 mm) above the flood level rim of the fixture or device. The critical level of the pressure vacuum breaker shall be set a minimum of 12 inches (304 mm) above the flood level rim of the fixture or device. Ball cocks shall be set in accordance with Section 425.3.1. Vacuum breakers shall not be installed under exhaust hoods or similar locations that will contain toxic fumes or vapors. Pipe-applied vacuum breakers shall be installed not less than 6 inches (152 mm) above the flood level rim of the fixture, receptor or device served. No valves shall be installed downstream of the atmospheric vacuum breaker.

(34) In Section 608.15.4.2, the following is added at the end of the paragraph:

In climates where freezing temperatures occur, a listed, self-draining frost proof hose bibb with an integral backflow preventer shall be used.

(35) Section 608.16.1 is deleted and replaced with the following:

608.16.1 Beverage dispensers. Potable water supply to carbonators shall be protected by a vented dual check valve meeting ASSE Standard 1022 and installed according to the requirements of this chapter.

(36) In Section 608.16.2, the first sentence of the paragraph is deleted and replaced as follows:

608.16.2 The potable water supply to the residential boiler shall be equipped with a backflow preventer with an intermediate atmospheric vent complying with ASSE 1012 or CSA CAN/CSA B64.3.

(37) Section 608.16.3 is deleted and replaced with the following:

608.16.3 Heat exchangers. Heat exchangers shall be separated from potable water by double-wall construction. An air gap open to the atmosphere shall be provided between the two walls.

Exceptions:

1. Single wall heat exchangers shall be permitted when all of the following conditions are met:

- a. Utilize a heat transfer medium of potable water or contains only substances which are recognized as safe by the United States Food and Drug Administration (FDA);
- b. The pressure of the heat transfer medium is maintained less than the normal minimum operating pressure of the potable water system; and
- c. The equipment is permanently labeled to indicate only additives recognized as safe by the FDA shall be used.

2. Steam systems that comply with paragraph 1 above.

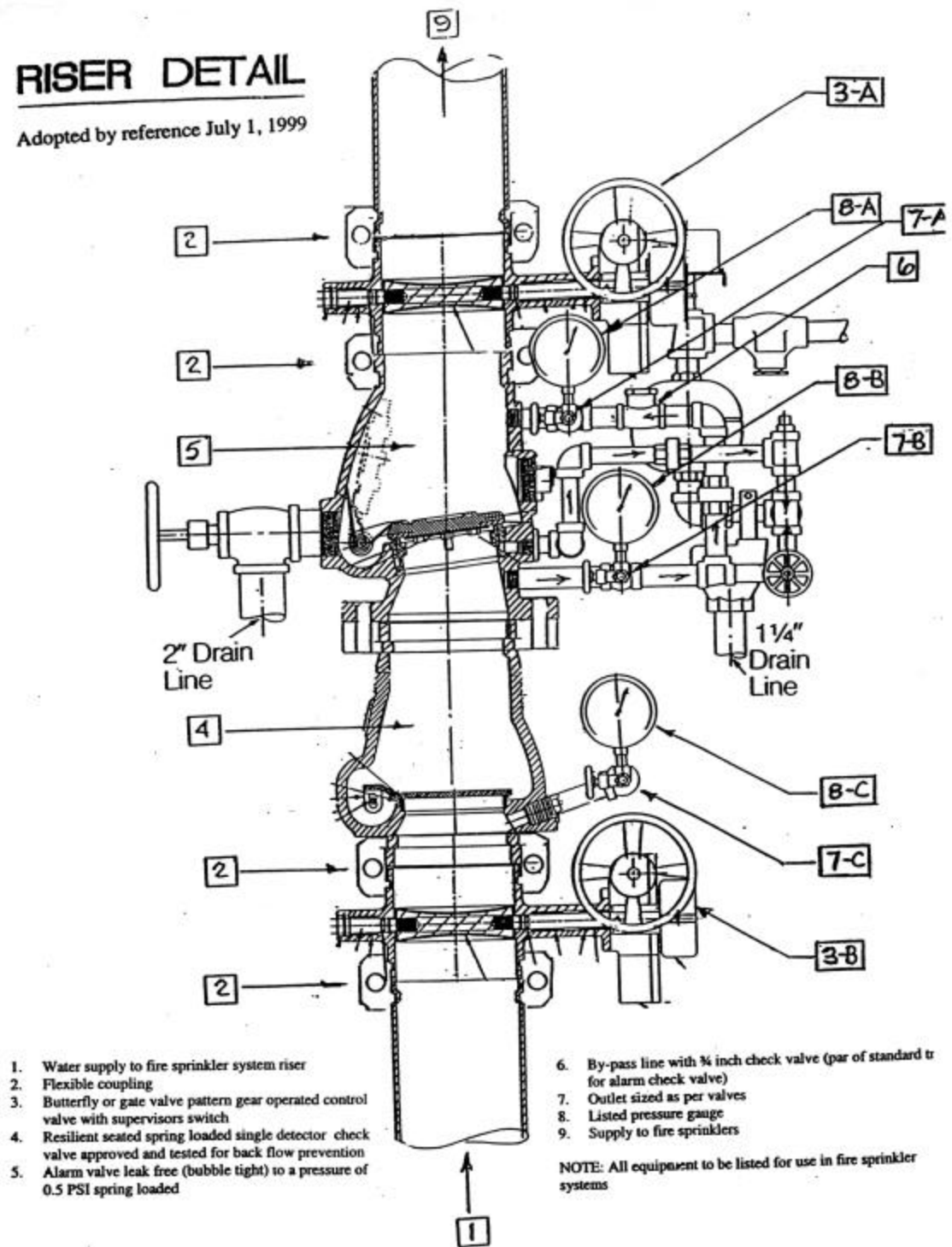
3. Approved listed electrical drinking water coolers.

(38) Section 608.16.4 is deleted and replaced with the following:

Section 608.16.4 Connections to automatic fire sprinkler systems and standpipe systems. The potable water supply to automatic fire sprinkler and standpipe systems shall be protected against backflow by an alarm check valve and spring loaded check valve assembly as shown on the diagram entitled "Riser Detail", dated July 1, 1999, published by State and Local Building Codes Amendments, Department of Commerce, Division of Occupational and Professional Licensing, which is hereby adopted and incorporated by reference.

# RISER DETAIL

Adopted by reference July 1, 1999



EXCEPTIONS:

1. When systems are installed as a portion of the water distribution system in accordance with the requirements of this code and are not provided with a fire department connection, isolation of the water supply system shall not be required.

2. Isolation of the water distribution system is not required for deluge, preaction or dry pipe systems.

3. When the sprinkler supply line is less than four inches in diameter and a resilient seated spring loaded single check valve, approved and testable for back flow prevention is not available, then an alternate, approved for fire sprinkler system use, spring loaded check valve is allowed.

(39) Section 608.16.4.1 is deleted and replaced with the following:

Section 608.16.4.1 Additives or nonpotable source. Where systems contain chemical additives or antifreeze, or where systems are connected to a nonpotable secondary water supply, the potable water supply shall be protected against backflow by a reduced pressure principle backflow preventor. Where chemical additives or antifreeze are added to only a portion of an automatic fire sprinkler or standpipe system, the reduced pressure principle backflow preventer shall be permitted to be located so as to isolate that portion of the system.

Exception:

1. For systems that use antifreeze only consisting of strictly pure glycerine (C.P. or U.S.P. 96.5 percent grade) or propylene glycol, equipment specified in Section 608.16.4 shall be used.

(40) Section 608.16.4.2 is added as follows:

Section 608.16.4.2 Testing Procedures. The testing procedures are as follows:

1. The check valves are to be tested by a currently certified Class II Backflow Technician in accordance with Rule R309-302 available from the Department of Environmental Quality.

2. All other mechanical devices attached to or part of a class I or class II fire sprinkler system shall be tested by a licensed fire sprinkler contractor.

(41) Section 608.16.6 is deleted and replaced with the following:

608.16.6 Connections to lawn irrigation systems. The potable water supply to lawn irrigation systems shall be protected against backflow by an atmospheric-type vacuum breaker, a pressure-type vacuum breaker, a double check valve backflow preventer or a reduced pressure principle backflow preventer. A valve shall not be installed downstream from an atmospheric vacuum breaker. Where chemicals are introduced into the system, the potable water supply shall be protected against backflow by a reduced pressure principle backflow preventer.

(42) Section 608.16.7 is deleted and replaced with the following:

608.16.7 Chemical dispensers. Where chemical dispensers connect to the water distribution system, the water supply system shall be protected against backflow in accordance with Section 608.13.1, Section 608.13.2, Section 608.13.5, Section 608.13.6 or Section 608.13.8.

(43) Section 608.16.8 is deleted and replaced with the following:

608.16.8 Portable cleaning equipment. Where the portable cleaning equipment connects to the water distribution system, the water supply system shall be protected against backflow in accordance with Section 608.13.1, Section 608.13.2 or Section 608.13.8.

(44) Section 608.16.9 is deleted and replaced with the following:

608.16.9 Dental pump equipment or water syringe. Where dental pumping equipment or water syringes connects to the water distribution system, the water supply system shall be protected against backflow in accordance with Section 608.13.1, Section 608.13.2, Section 608.13.5, Section 608.13.6 or Section 608.13.8.

(45) Section 608.16.10 is added as follows:

608.16.10 Automatic and coin operated car washes. The water supply to an automatic or coin operated car wash shall be protected in accordance with Section 608.13.1 or Section 608.13.2.

(46) Section 608.17 is deleted in its entirety.

(47) Section 701.2 is deleted and replaced with the following:

701.2 Sewer required. Every building in which plumbing fixtures are installed and all premises having drainage piping shall be connected to a public sewer where the sewer is

within 300 feet of the property line in accordance with Section 10-8-38, Utah Code Ann., (1953), as amended; or an approved private sewage disposal system in accordance with Rule R317-5501 through R317-513 and Rule R317-5, Utah Administrative Code, as administered by the Department of Environmental Quality, Division of Water Quality.

(48) Section 802.1.1 is deleted and replaced with the following:

802.1.1 Food handling. Equipment and fixtures utilized for the storage, preparation and handling of food shall discharge through an indirect waste pipe by means of an air gap.

Exception: This requirement shall not apply to dishwashing machines and dishwashing sinks.

If used for dishwashing and food preparation, a minimum of one compartment of the dishwashing sink shall be drained through an indirect waste pipe by means of an air gap or an air break.

(49) Section 802.3 is amended as follows:

The term "waste receptors" in the last sentence of the paragraph is replaced with the term "floor sinks".

(50) Section 802.3.2 is deleted in its entirety and replaced with the following:

802.3.2 Open hub waste receptors. Waste receptors for clear water waste shall be permitted in the form of a hub or pipe extending not more than 1/2 inch above a water impervious floor and are not required to have a strainer.

(51) In Section 904.6, the following sentence is added at the end of the paragraph:

Vents extending through the wall shall terminate not less than 12 inches from the wall with an elbow pointing downward.

(52) In Section 905.4, the following sentence is added at the end of the paragraph:

Horizontal dry vents below the flood level rim shall be permitted for floor drain and floor sink installations when installed in accordance with Sections 702.2, 905.2 and 905.3 and provided with a wall clean out.

(53) Section 1002.4.1 is added as follows:

1002.4.1 Emergency floor drains. Each emergency floor drain shall be installed with a trap seal primer. Trap seal primer shall conform to ASSE 1018 or ASSE 1044.

(54) Section 1003.3.5 is added as follows:

1003.3.5 Grease trap restriction. Unless specifically required or permitted by the code official, no food waste grinder or dishwasher shall be connected to or discharge into any grease trap.

(55) Section 1104.2 is deleted and replaced with the following:

1104.2 Combining storm and sanitary drainage prohibited. The combining of sanitary and storm drainage systems is prohibited.

(56) Section 1108 is deleted in its entirety.

(57) Section 1204 is added as follows:

1204 Fuel gas piping systems. All fuel gas piping systems shall be sized, installed, tested and placed in operation in accordance with the requirements of the 1998 International Mechanical Code.

(58) Section 1205 is added as follows:

Section 1205 CNG GAS-DISPENSING SYSTEMS

1205.1 Dispenser protection. The gas dispenser shall have an emergency switch to shut off the power to the dispenser. An approved backflow device that prevents the reverse flow of gas shall be installed on the gas supply pipe or in the gas dispenser.

1205.2 Ventilation. Gas-dispensing systems installed inside the structure shall be ventilated by mechanical means in accordance with the 1998 International Mechanical Code.

1205.3 Compressed natural gas vehicular fuel systems. Compressed natural gas (CNG) fuel-dispensing systems for CNG-fueled vehicles shall be designed and installed in accordance with NFPA 52 and the fire code as adopted by the State Fire Marshal.

(59) Chapter 14, Referenced Standards, is amended as follows:

NSF - Standard Reference Number 61-99 - The following referenced in code section number is added: 608.11

The following reference standard is added:

TABLE

USC- Foundation for Cross-Connection Table 608.1  
FCCCHR Control and Hydraulic Research  
9th University of Southern California  
Edition Kaprielian Hall 300  
Manual Los Angeles CA 90089-2531  
of Cross  
Connection  
Control

(60) Appendix C of the IPC, Gray Water Recycling Systems, shall not be adopted by any jurisdiction until approved by the Department of Health and the Department of Environmental Quality.

R156-56-708. Statewide Amendments to the IMC.

The following are adopted as amendments to the IMC to be applicable statewide:

(1) Chapter 3, Section 304.8 is amended by adding the following exception at the end of the paragraph:

Exception: R-3 occupancy.

(2) Chapter 3, Section 304.9 is amended by adding the following exception at the end of the paragraph:

Exception: R-3 occupancy.

(3) Chapter 3, Section 306.5 is amended by adding the following exception at the end of the paragraph:

Exception: R-3 occupancy.

(4) Chapter 3, Section 306.6 is amended by adding the following exception at the end of the paragraph:

Exception: Evaporative coolers serving R-3 occupancy.

(5) Chapter 6, Section 603.8.1 is added as follows:

Section 603.8.1 Residential round ducts. Crimp joints for residential round ducts shall have a contact lap of at least 1 1/2 inches (38 mm) and shall be mechanically fastened by means of at least three sheet metal screws equally spaced around the joint, or an equivalent fastening method.

R156-56-709. Statewide Amendments to the IFGC.

The following are adopted as amendments to the IFGC to be applicable statewide:

(1) Chapter 3, Section 306.5 Appliances on roofs or elevated structures is amended by adding the following exception at the end of the paragraph:

Exception: R-3 occupancies.

(2) Chapter 3, Section 306.6 Guards is amended by adding the following exception at the end of the paragraph:

Exception: R-3 occupancy.

(3) Chapter 5, Section 503.10.13 Inspection is amended as follows:

503.10.13 Inspection. The entire length of a single wall vent connector shall be provided with ready access for inspection, cleaning, and replacement.

(4) Chapter 5, Section 504.3.5 is deleted and replaced with the following:

504.3.5 Common vertical vent offset. Where the common vertical vent is offset as shown in Figure B-12, the maximum common vent capacity listed in the common venting tables shall be reduced by 5% per fitting for all offsets of 45 degrees or less and 10% per fitting for all offsets greater than 45 degrees. The total horizontal length of the common vent offsets ( $L_M$ ) shall not exceed 1 1/2 feet for each inch (18 mm per mm) of common vent diameter (D).

R156-56-710. Statewide Amendments to the IECC.

The following are adopted as amendments to the IECC to be applicable statewide:

(1) Section 801.2 is deleted and replaced with the following:

801.2 Application. The requirements in Section 802, 803, 804, and 805 shall each be satisfied on an individual basis. Where one or more of these sections is not satisfied, compliance with that section shall be demonstrated in accordance with the applicable

provisions of ANSI/ASHRAE/IESNA Standard 90.1-1999 Energy Standard for Buildings Except Low-Rise Residential Buildings.

(2) Chapter 9 Reference Standards, ASHRAE, Item 4 is deleted and replaced with the following:

ANSI/ASHRAE/IESNA - Energy Standard for Buildings Except Low Rise Residential Buildings 503.1, 701.101.2, 802.1 and 802.2.

R156-56-711. Statewide Amendments to the IRC.

The following are adopted as amendments to the IRC to be applicable statewide:

(1) All amendments to the IBC under Section R156-56-704, the NEC under Section R156-56-708, the IFGC under Section R156-56-709 and the IECC under Section R156-56-710 which may be applied to detached one and two family dwellings and multiple single family dwellings shall be applicable to the corresponding provisions of the IRC.

(2) In Section R202, the definition of ABacksiphonage@ is deleted and replaced with the following:

BACKSIPHONAGE: The backflow of potentially contaminated, polluted or used water into the potable water system as a result of the pressure in the potable water system falling below atmospheric pressure of the plumbing fixtures, pools, tanks or vats connected to the potable water distribution piping.

(3) In Section R202 the following definition is added:

CERTIFIED BACKFLOW PREVENTER ASSEMBLY TESTER: A person who has shown competence to test Backflow prevention assemblies to the satisfaction of the authority having jurisdiction under Subsection 19-4-104(4), Utah Code Ann. (1953), as amended.

(4) In Section R202 the definition of ACross Connection@ is deleted and replaced with the following:

CROSS CONNECTION. Any physical connection or potential connection or arrangement between two otherwise separate piping systems, one of which contains potable water and the other either water of unknown or questionable safety or steam, gas or chemical, whereby there exists the possibility for flow from one system to the other, with the direction of flow depending on the pressure differential between the two systems(see ABackflow, Water Distribution@).

(5) In Section R202 the following definition is added:

HEAT exchanger (Potable Water). A device to transfer heat between two physically separated fluids (liquid or steam), one of which is potable water.

(6) In section R202 the definition of APotable Water@ is deleted and replaced with the following:

POTABLE WATER. Water free from impurities present in amounts sufficient to cause disease or harmful physiological effects and conforming to the Titles 19-4 and 19-5, Utah Code Ann. (1953), as amended and the regulations of the public health authority having jurisdiction.

(7) In Section R202 the definition of AWater Heater@ is deleted and replaced with the following:

WATER HEATER. A closed vessel in which water is heated by the combustion of fuels or electricity and is withdrawn for use externally to the system at pressures not exceeding 160 psig (1100 kPa (gage)), including the apparatus by which heat is generated, and all controls and devices necessary to prevent water temperatures from exceeding 210 degrees Fahrenheit (99 degrees Celsius).

(8) Section R304.3 is deleted and replaced with the following:

R304.3 Minimum dimensions. Habitable rooms shall not be less than 7 feet (2134 mm) in any horizontal dimension.

Exception: Kitchens shall have a clear passageway of not less than 3 feet (914 mm) between counter fronts and appliances or counter fronts and walls.

(9) Section R309.2 is deleted and replaced with the following:

R309.2 Separation required. The garage shall be separated from the residence and its attic area by installation of materials approved for one-hour fire-resistive construction applied to the garage side. Where the separation is a floor-ceiling assembly, the structure supporting the separation shall also be protected by installation of materials approved for one-hour fire-resistive construction.

(10) Section R314.2, until July 1, 2002, is deleted and replaced with the following:

R314.2 Trends and risers. The maximum riser height shall be 8 inches (203 mm) and the minimum tread depth shall be 9 inches (229 mm). The riser height shall be measured vertically between leading edges of the adjacent treads. The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. The walking surface of treads and landings of a stairway shall be sloped no steeper than one unit vertical in 48 units horizontal (2-percent slope). The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5 mm). The greatest tread depth within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5 mm).

R314.2.1 Profile. The radius of curvature at the leading edge of the tread shall be no greater than 9/16 inch (14.3 mm). A nosing not less than 3/4 inch (19.1 mm) but not more than 1 1/4 inches (32 mm) shall be provided on stairways with solid risers. The greatest nosing projection shall not exceed the smallest nosing projection by more than 3/8 inches (9.5 mm) between two stories, including the nosing at the level of floors and landings. Beveling of nosing shall not exceed 1/2 inch (12.7 mm). Risers shall be vertical or sloped from the underside of the leading edge of the tread above at an angle not more than 30 degrees from the vertical. Open risers are permitted, provided that the opening between treads does not permit the passage of a 4-inch diameter (102 mm) sphere.

Exceptions.

1. A nosing is not required where the tread depth is a minimum of 10 inches (254 mm).

2. The opening between adjacent treads is not limited on stairs with a total rise of 30 inches (762 mm) or less.

(3) After July 1, 2002, the provisions of Section R314.2 apply as originally published in the IRC without amendment.

(11) Section R315.2 is deleted and replaced with the following:

R315.2 Handrail grip size. The handgrip portion of handrails shall have a circular cross section of 1 1/4 inches (32mm) minimum to 2 5/8 inches (67mm) maximum. Edges shall have a minimum radius of 1/8 inch (3.2mm).

Exception: Non-circular handrails shall be permitted to have a maximum cross sectional dimension of 3.25 inches (83mm) measured 2 inches (51 mm) down from the top of the crown. Such handrail is required to have an indentation on both sides between 0.625 inch (16mm) and 1.5 inches (38mm) down from the top or crown of the cross section. The indentation shall be a minimum of 0.25 inch (6mm) deep on each side and shall be at least 0.5 inch (13 mm) high. Edges within the handgrip shall have a minimum radius of 0.0625 inch (2 mm). The handrail surface shall be smooth with no cusps so as to avoid catching clothing or skin.

(12) In Section 321.3.2 Exception 1.1 is deleted and replaced with the following:

1.1 By a horizontal distance of not less than the width of a stud space regardless of stud spacing, or

(13) Section R403.1.6.1 is deleted and replaced with the following:

R403.1.6.1 Foundation anchorage in Seismic Design Categories D<sub>1</sub> and D<sub>2</sub>. In addition to the requirements of Section R403.1.6, the following requirements shall apply to light-wood frame structures in Seismic Design Categories D<sub>1</sub> and D<sub>2</sub>. Anchor bolts shall be located within 12 inches (305 mm) from the ends of each plate section at interior bearing walls, interior braced wall lines and at all exterior walls. Plate washers a minimum of 2 inches by 2 inches by 3/16 inch (51 mm by 4.8 mm) thick shall be used on each bolt.

Exceptions:

a. When anchor bolt spacing does not exceed 32 inches (816 mm) apart, anchor bolts may be placed with a minimum of two bolts per plate section located not less than 4 inches (102 mm) from each end of each plate section at interior bearing walls, interior braced wall lines and at all exterior walls.

b. When anchor bolt spacing does not exceed 32 inches (816 mm) apart, a properly sized round washer may be used.

The maximum anchor bolt spacing shall be 4 feet (1219 mm) for two-story structures.

(14) In Section R703.7 Stone and masonry veneer, general the following exceptions are added:

Exceptions:

3. For detached one- or two-family dwellings with a maximum nominal thickness of 4 inches (102 mm) of exterior masonry veneer with a backing of wood frame located in Seismic Design Category D<sub>1</sub>, the masonry veneer shall not exceed 20 feet (6096 mm) in height above a noncombustible foundation, with an additional 8 feet (2438 mm) permitted for gabled ends, or 30 feet (9144 mm) in height with an additional 8 feet (2438 mm) permitted for gabled ends where the lower 10 feet (3048 mm) has a backing of concrete or masonry wall, provided the following criteria are met:

(a) Braced wall panels shall be constructed with a minimum of 7/16 inch (11.1 mm) thick sheathing fastened with 8d common nails at 4 inches (102 mm) on center on panel edges and at 12 inches (305 mm) on center on intermediate supports.

(b) The bracing of the top story shall be located at each end and at least every 25 feet (7620 mm) on center but not less than 45% of the braced wall line. The bracing of the first story shall be as provided in Table R602.10.3.

(c) Hold down connectors shall be provided at the ends of braced walls for the second floor to first floor wall assembly with an allowable design of 2100 lbs (952.5 kg). Hold down connectors shall be provided at the ends of each wall segment of the braced walls for the first floor to foundation assembly with an allowable design of 3700 lbs. (1678 kg). In all cases, the hold down connector force shall be transferred to the foundation.

(d) Cripple walls shall not be permitted.

4. For detached one- and two-family dwellings with a maximum actual thickness of 3 inches (76 mm) of exterior masonry veneer with a backing of wood frame located in Seismic Design Category D<sub>2</sub>, the masonry veneer shall not exceed 20 feet (6096 mm) in height above a noncombustible foundation, with an additional 8 feet (2438 mm) permitted for gabled ends, or 30 feet (9144 mm) in height with an additional 8 feet (2438 mm) permitted for gabled ends where the lower 10 feet (3048 mm) has a backing of concrete on masonry wall, provided the following criteria are met:

(a) Braced wall panels shall be constructed with a minimum of 7/16 inch (11.1 mm) thick sheathing fastened with 8d common nails at 4 inches (102 mm) on center on panel edges and at 12 inches (305 mm) on center on intermediate supports.

(b) The bracing of the top story shall be located at each end and at least every 25 feet (7620 mm) on center but not less than 55% of the braced wall line. The bracing of the first story shall be as provided in Table R602.10.3.

(c) Hold down connectors shall be provided at the ends of braced walls for the second floor to first floor wall assembly with an allowable design of 2300 lbs (1043 kg). Hold down connectors shall be provided at the ends of each wall segment of the braced walls for the first floor to foundation assembly with an allowable design of 3900 lbs. (1769 kg). In all cases, the hold down connector force shall be transferred to the foundation.

(d) Cripple walls shall not be permitted.

(15) Section P2602.2 is added as follows:

P2602.2 Individual water supply. Where a potable public water supply is not available, individual sources of potable water supply shall be utilized provided that the source has been developed in accordance with Sections 73-3-1 and 73-3-25, Utah Code Ann. (1953), as amended, as administered by the Department of Natural Resources, Division of Water Rights. In addition, the quality of the water shall be approved by the local health department having jurisdiction.

(16) Section P2602.3 is added as follows:

P2602.3 Sewer required. Every building in which plumbing fixtures are installed and all premises having drainage piping shall be connected to a public sewer where the sewer is within 300 feet of the property line in accordance with Section 10-8-38, Utah Code Ann. (1953), as amended; or an approved private sewage disposal system in accordance with Rule R317-5501 through R317-513 and Rule R317-5, Utah Administrative Code, as administered by the Department of Environmental Quality, Division of Water Quality.

(17) Section P2801.2 is added as follows:

P2801.2 Water heater seismic bracing. Water heaters shall be anchored or strapped in the upper third of the appliance to resist a horizontal force equal to one third the operating weight of the water heater, acting in any horizontal direction, or in accordance with the appliance manufacturers recommendations.

(18) Section P2902.1.1 is added as follows:

P2902.1.1 Backflow assembly testing. The premise owner or his designee shall have backflow prevention assemblies operation tested at the time of installation, repair and relocation and at least on an annual basis thereafter, or more frequently as required by the authority having jurisdiction. Testing shall be performed by a Certified Backflow Preventer Assembly Tester. The assemblies that are subject to this paragraph are the Spill Resistant Vacuum Breaker, the Pressure Vacuum Breaker Assembly, the Double Check Backflow Prevention Assembly, the Double Check Detector Assembly Backflow Preventer, the Reduced Pressure Principle Backflow Preventer, and Reduced Pressure Detector Assembly, and the spring loaded check valve assembly described in amended Section 608.16.4 of the International Plumbing Code.

(19) Section P2903.9.3 is deleted and replaced with the following:

P2903.9.3 Valve requirements. Valves serving individual fixtures, appliances, risers, and branches shall be provided with access. An individual shutoff valve shall be required on the water supply pipe to each water closet, lavatory, kitchen sink, and appliance.

(20) Section P3003.2.1 is added as follows:

Section P3003.2.1 Improper Connections. No drain, waste, or vent piping shall be drilled and tapped for the purpose of making connections.

(21) In Section P3103.6, the following sentence is added at the end of the paragraph:

Vents extending through the wall shall terminate not less than 12 inches from the wall with an elbow pointing downward.

(22) In Section P3104.4, the following sentence is added at the end of the paragraph:

Horizontal dry vents below the flood level rim shall be permitted for floor drain and floor sink installations when installed below grade in accordance with Chapter 30, and Sections P3104.2 and P3104.3. A wall cleanout shall be provided in the vertical vent.

(23) Chapter 43, Referenced Standards, is amended as follows:

The following reference standard is added:

#### TABLE

USC-	Foundation for Cross-Connection	Section P2902
FCCCHR	Control and Hydraulic Research	
9th	University of Southern California	
Edition	Kaprielian Hall 300	
Manual	Los Angeles CA 90089-2531	
of Cross		
Connection		
Control		

R156-56-712. Local Amendments to the IRC.

The following are adopted as amendments to the IRC to be applicable to the following jurisdictions:

(1) City of Farmington:

Sections R328.1 and R328.2 are added as follows:

R328.1 When required. An automatic sprinkler system shall be installed throughout every dwelling in accordance with NFPA 13-D, when any of the following conditions are present:

1. the structure is over two stories high, as defined by the building code;
2. the nearest point of structure is more than 150 feet from the public way;
3. the total floor area of all stories is over 5,000 square feet (excluding from the calculation the area of the basement and/or garage); or
4. the structure is located on a street constructed after March 1, 2000 that has a gradient over 12% and, during fire department response, access to the structure will be gained by using such street. (If the access is intended to be from a direction where the steep gradient is not used, as determined by the Chief, this criteria shall not apply).

R328.2 Installation requirements and standards. Such sprinkler system shall be installed in basements, but need not be installed in garages, under eaves or in enclosed attic spaces, unless required by the Chief. Such system shall be installed in accordance with NFPA 13-D.

(2) City of North Salt Lake:

Sections R328.1 and R328.2 are added as follows:

R328.1 When Required. An automatic sprinkler system shall be installed throughout every dwelling when the following condition is present:

1. The structure is over 6,200 square feet.

R328.2 Installation requirements and standards. Such sprinkler system shall be installed in basements, but need not be installed in garages, under eaves, or in enclosed attic spaces, unless required by the fire chief. Such system shall be installed in accordance with NFPA 13-D.

(3) Park City Corporation:

Section R905.7 is deleted and replaced with the following:

R905.7 Wood shingles. The installation of wood shingles shall comply with the provisions of this section.

Wood roof covering is prohibited in areas with a combined rating of more than 11 using the following tables with a score of 9 for weather factors.

TABLE  
WILDFIRE HAZARD SEVERITY SCALE

RATING	SLOPE	VEGETATION
1	less than or equal to 10%	Pinion-juniper
2	10.1 - 20%	Grass-sagebrush
3	greater than 20%	Mountain brush or softwoods

PROHIBITION/EXEMPTION TABLE

RATING	WOOD ROOF PROHIBITION
less than or equal to 11	wood roofs are allowed
greater than or equal to 12	wood roofs are prohibited

Section R905.8 is deleted and replaced with the following:

R905.8 Wood Shakes. The installation of wood shakes shall comply with the provisions of this section. Wood roof covering is prohibited in areas with a combined rating of more than 11 using the following tables with a score of 9 for weather factors.

TABLE  
WILDFIRE HAZARD SEVERITY SCALE

RATING	SLOPE	VEGETATION
1	less than or equal to 10%	Pinion-juniper
2	10.1 - 20%	Grass-sagebrush
3	greater than 20%	Mountain brush or softwoods

PROHIBITION/EXEMPTION TABLE

RATING	WOOD ROOF PROHIBITION
less than or equal to 11	wood roofs are allowed
greater than or equal to 12	wood roofs are prohibited

Appendix K is adopted.

KEY: contractors, building codes, building inspection, licensing  
Effective January 1, 2002  
Notice of Continuation June 3, 1997

58-1-106(1)  
58-1-202(1)  
58-56-1  
58-56-4(2)  
58-56-6(2)(a)

**UTAH UNIFORM BUILDING  
STANDARD ACT RULES**

**R156-56  
Utah Administrative Code  
Issued January 1, 2002**